

MAR 7 1958

CRPL-F162 PART B

FOR OFFICIAL USE

*Reference to be
taken from the*

PART B
SOLAR - GEOPHYSICAL DATA

ISSUED
FEBRUARY 1958

U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
BOULDER, COLORADO

SOLAR - GEOPHYSICAL DATA

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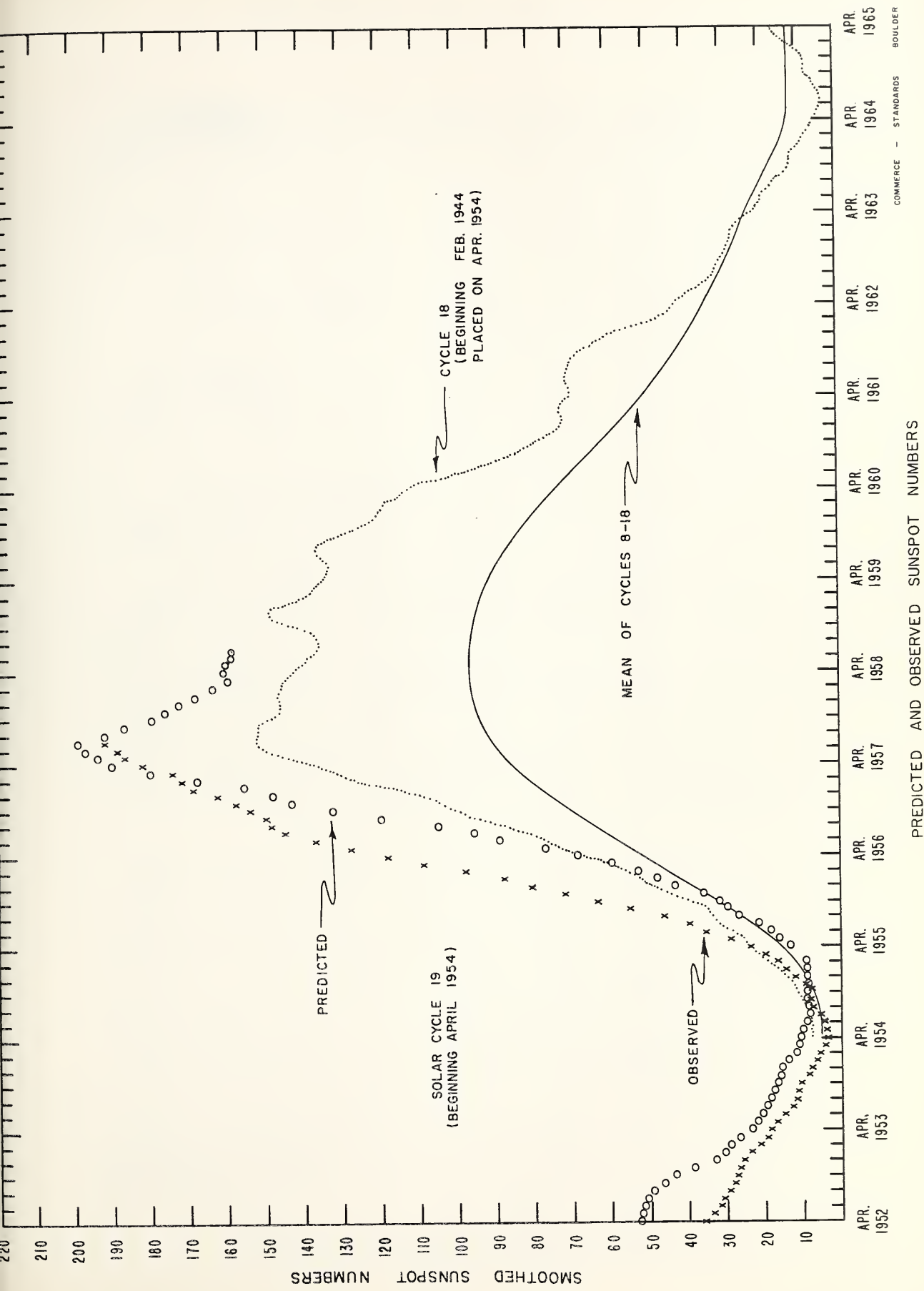
INTRODUCTION

The descriptive text will be published quarterly, hereafter, or whenever context of the report is changed. The last issue in which the text appeared was CRPL-F161 Part B issued January 1958.

DAILY SOLAR INDICES

Dec. 1957	American Relative Sunspot Numbers R_A
1	206
2	206
3	203
4	264
5	209
6	251
7	192
8	167
9	151
10	121
11	124
12	116
13	125
14	151
15	169
16	205
17	194
18	213
19	257
20	288
21	323
22	342
23	295
24	312
25	375
26	307
27	292
28	292
29	246
30	238
31	231
Mean:	227.9

Jan. 1958	Zürich Provisional Relative Sunspot Numbers R_Z	Daily Values Solar Flux at 2800 Mc, Ottawa, Canada Flux
1	214	257
2	213	263
3	200	262
4	217	261
5	191	246
6	192	254
7	205	255
8	210	255
9	232	259
10	252	274
11	253	273
12	255	290
13	262	310
14	270	321
15	284	309
16	290	297
17	247	285
18	230	260
19	212	238
20	190	251
21	171	239
22	173	227
23	192	210
24	137	211
25	137	206
26	143	220
27	182	200
28	160	189
29	130	194
30	110	181
31	132	187
Mean:	202.8	247.9



CALCIUM PLAGE AND SUNSPOT REGIONS
JANUARY 1958

CMP Jan. 1958	Lat	McMath Plage Number	Return of Region	Calcium Plage Data			Sunspot Data		
				CMP Values Area Int.		History, Age	CMP Values Area Count		History
01.6	S29	4341	4285	1400	2	1 - 1 2			
02.9	S28	4342	4285	800	1.5	1 - 1 2			
03.8	N29	4338	*	2800	3	1 v 1 3	390	9	1 - 1
04.4	S19	4340	New	1700	3	1 ^ 1 1	290	8	b ^ d
04.5	S05	4339	New	300	2	1 v 1 1			
04.7	S28	4343	4301	600	1.5	1 v 1 2			
05.1	N20	4345	*	800	1.5	1 - 1 3			
05.8	S26	4344	4301	1000	1.5	1 - 1 2			
06.0	N06	4346	4296	2000	3	1 v 1 3	100	1	1 - d
06.2	N19	4352	**	600	1.5	** - 1 **			
06.9	N33	4349	New	1000	2	1 - 1 1	(390) (13)		b ^ d
07.0	N12	4347	4296	7000	3.5	1 v 1 3	730	32	1 ^ 1
07.2	S18	4348	4300	2500	2	1 v 1 5	100	1	1 v 1
08.5	S38	4357	New	800	3	b / 1 1	340	7	b ^ d
08.8	S08	4350	New	300	1	1 v d 1			
09.5	N13	4354	4305	800	2.5	1 - 1 2			
09.5	S21	4369	New	(600) (1.5)		b - 1 1			
09.7	N32	4367	New	500	2	b - 1 1			
10.0	S18	4356	New	2100	3	1 - 1 1	440	9	1 - 1
10.4	S30	4351	New	2700	3	1 - 1 1	460	7	1 v 1
10.8	N25	4353	4305	1300	1.5	1 v 1 2			
10.8	N05	4361	New	800	1.5	b - d 1			
11.6	N13	4358	4306	400	1.5	1 v 1 2			
11.7	S13	4355	4308	5500	3.5	1 - 1 3	580	29	1 ^ 1
13.5	S20	4362	4311	1000	2	1 - 1 2	50	3	b - d
13.8	N25	4359	New	5800	3	1 - 1 1	1330	31	1 ^ 1
14.3	S14	4360	4313	1000	1.5	1 v 1 2	(50) (1)		b - d
15.3	S15	4365	4313	800	2	1 v 1 2			
15.5	N28	4366	New	2000	2.5	1 - 1 1	230	1	1 - 1
15.6	S26	4363	4313	600	2	1 v 1 2	180	4	1 v 1
15.9	N18	4364	314	3000	2	1 - 1 2	50	5	b - d
16.6	S08	4368	New	6500	3	1 - 1 1	510	8	1 ^ 1
17.8	N14	4370	New	3700	2.5	1 - 1 1	1720	21	1 - 1
18.4	N27	4374	4316	700	1.5	1 - 1 2			
19.2	S18	4373	4318	100	1	1 - 1 4			
19.5	N22	4375	4317	1000	1.5	1 - 1 2	50	1	b \ d
20.5	S15	4377	New	700	2	1 v 1 1	50	1	b - d
20.6	S24	4372	4319	1500	1.5	1 ^ 1 6	170	3	b / 1
21.0	N27	4376	***	3500	2.5	1 - 1 2	480	6	1 - 1
22.2	N07	4379	4334	1500	1.5	1 - 1 2	20	1	b - d
22.4	S15	4378	4323	4000	2.5	1 - 1 3	150	3	1 - 1
22.7	S06	4380	4326	(500) (1.5)		1 - d 2			
23.2	N27	4381	***	5500	3	1 - 1 2	440	9	1 - 1
23.6	N14	4383	4325	(1000) (1.5)		1 - d 7			
24.8	S17	4382	4333	4000	3	1 - 1 6	870	18	1 ^ 1
27.2	S12	4384	4336	2000	2	1 - 1 2	120	1	b - 1
28.3	S25	4385	4335	(1500) (2)		1 - 1 6	50	3	b ^ d
28.4	N26	4386	4337	2800	2	1 - 1 2	150	3	1 - d
30.4	N11	4389	New	(300) (1.5)		b - 1 1			
30.5	N22	4387	4338	5300	3	1 - 1 4	360	15	1 ^ 1
31.8	N18	4388	4338	3600	1	1 - 1 4	310	6	1 ^ d
31.9	S06	4391	4339	600	3	1 - 1 2	70	3	b ^ 1

* 4294, 4295.

** Originally given as part of region 4347.

*** 4321, 4328.

COMMERCE - STANDARDS - BOULDER

Note: Long gaps in McMath observations render identification and disk passage histories questionable in some cases.

CORONAL LINE EMISSION INDICES

JANUARY 1958

CMP Jan. 1958	North East Quadrant (observed 7 days earlier)				South East Quadrant (observed 7 days earlier)				South West Quadrant (observed 7 days later)				North West Quadrant (observed 7 days later)			
	G ₆	G ₁	R ₆	R ₁	G ₆	G ₁	R ₆	R ₁	G ₆	G ₁	R ₆	R ₁	G ₆	G ₁	R ₆	R ₁
1	x	x	x	x	x	x	x	x	156	246	23	46	114	192	27	43
2	128	180	27	40	207	312	34	84	101	151	11	20	79	142	25	42
3	141	216	35	64	168	289	31	57	206	277	40	73	153	256	50	81
4	x	x	x	x	x	x	x	x	117	162	20	48	123	166	27	53
5	x	x	x	x	x	x	x	x	127	186	24	40	187	256	51	90
6	x	x	x	x	x	x	x	x	60	80	9	20	95	130	36	50
7	197	268	55	111	120	164	33	92	75	115	x	x	79	104	x	x
8	x	x	x	x	135	174	x	x	137	169	x	x	136	186	x	x
9	x	x	x	x	x	x	x	x	108	130	31	50	84	112	21	36
10	x	x	x	x	x	x	x	x	154*	200	x	x	89	102	x	x
11	143	220	39	65	126*	170	34	87	x	x	x	x	x	x	x	x
12	154	220	26	36	120	150	40	78	x	x	x	80a	x	x	x	x
13	148	202	31	78	153	192	41	84	158a	253a	51a	x	x	x	47a	80a
14	160	222	42	70	130*	188	66	97	x	x	x	x	185	x	x	x
15	186	226	32	60	156	211	37	50	206	300	41	75	270	x	38	73
16	101	137	39	67	89	144	35	54	212	276	x	x	143	195	x	x
17	160	248	94	186	128	156	53	90	x	x	x	x	x	x	x	x
18	168	294	27	53	88	154	24	45	x	x	x	x	x	x	x	x
19	182*	253	41	72	111	213	29	84	x	x	x	x	x	x	x	x
20	81	126	38	80	54	93	37	96	x	x	x	x	x	x	x	x
21	84	136	x	x	65	88	x	x	x	x	x	x	x	x	x	x
22	199*	220	x	x	186	211	x	x	x	x	x	x	x	x	x	x
23	130*	184	50	66	114	144	24	42	x	x	x	x	x	x	x	x
24	121	164	x	x	148	196	x	x	x	x	x	x	x	x	x	x
25	x	x	x	x	x	x	x	x	186	226	x	x	76	115	x	x
26	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
27	105a	188a	44a	69a	153a	212a	50a	72a	x	x	x	x	x	x	x	x
28	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
29	115	176	36	54	123	192	16	28	x	x	x	x	x	x	x	x
30	104	172	x	x	105	143	x	x	x	x	x	x	x	x	x	x
31	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

* = yellow line observed.
a = index computed from low weight data.
x = no observations.

SOLAR FLARES

JANUARY 1958

OBSERVATORY	DATE	OBSERVED TIME		LOCATION			DURA- TION — MINUTES	IN- POR- TANCE	OBS. COND.	MEASUREMENTS				PROVISIONAL IONOSPHERIC EFFECT	
		START	END	MAX. PHASE	APPROX.					TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H _o		MAX. INT. %
					LAT.	MER. DIST.									
MITAKA TASHKENT WENDEL WENDEL WENDEL SAC PEAK SAC PEAK CLIMAX SAC PEAK CLIMAX SAC PEAK SAC PEAK	01	0039 E	0045	S11 E00	4336	6 D	1	2	0041	1.84	1.86	1.92	1	S-SWF	
	01	0511	0615	N03 E66	4346	64	16								
	01	1046	1107	S23 W33	4333	21	1				3.00				
	01	1058	1138	S18 E38	4340	40	1				3.00				
	01	1121	1135	S23 E32	4340	14	1				4.00				
	01	1330	1346 D	S05 W32	4336	16 D	1				3.00				
	01	1617	1637	S19 E35	4340	20	1	2		.60			13		
	01	1700	1710	N02 E60	4346	10	1	2		.50			13		
	01	1702	1814	S23 W32	4333	72	1			2.80					
	01	1712	1717	S23 W35	4333	5	1	2		1.00			13		
	01	1745	1755	S22 W38	4333	10	1	2		.50			14		
	01	1729	1911	N19 E52	4345	102	2			7.40					
NIZAMIAH ARCETRI ZURICH WENDEL USNRL MT WILSON USNRL MT WILSON MITAKA	01	1747	1820 U	N18 E47	4345	33 U	1	2		2.70			14	S-SWF	
	01	2037	2047	N17 E25	4338	10	1	2		.30			13		
	02	0557 E	0616	S14 E29	4340	19 D	1	3	0557	2.43	2.82	1.60			
	02	0910	0943	S23 W41	4333	33	16	2							
	02	0931	0942	S22 W46	4333	11	1	3	0934		2.00				
	02	0936 E	0946	S22 W47	4333	10 D	1				4.00				
	02	1550	1612	N14 E58	4347	22	1	2	1558	1.02	2.12		72		
	02	2002	2007	N12 E52	4347	5	1								
	02	2011	2103	S23 W48	4333	52	1	2	2017	1.13	1.81	2.00	106		
	02	2015	2121	S22 W50	4333	66	1								
	02	2347 E	2353	N13 E48	4346	6 D	1	2	2350	.89	1.41	2.50	134		
	MITAKA MITAKA MITAKA MITAKA UCCLE UCCLE ARCETRI UCCLE UCCLE SAC PEAK OTTAWA CLIMAX MT WILSON	03	0227	0304	N12 E61	4347	37	16	2	0227	5.67	12.00	2.62		107
03		0406	0418	N12 E60	4347	12	16	1	0409	1.86	4.20	3.00	176		
03		0406	0418	N17 E50	4347	12	1	1	0410	1.07	1.90	1.87	96		
03		0507	0526	S28 W45	4333	19	1	1	0514	1.84	2.58	2.59	122		
03		1044	1055	N21 E01	4338	11	1	3	1046	1.50	2.00				
03		1053	1057	N13 E45	4347	4	16	3	1055	4.00	5.60				
03		1150 E	1205	N15 E63	4347	15 D	16	2							
03		1427	1455	N18 W01	4338	28	16	2	1432	5.00					
03		1505		S25 E14	4340	2	1	1							
03		1510 E	1610	S23 E14	4340	60 D	1	2		2.50			20		
03		1526 E		S21 E14	4340	27 D	1	1	1528	2.84	3.10				
03		1540 E	1607	S21 E16	4340	27 D	1			2.80					
UCCLE WENDEL USNRL MT WILSON CLIMAX MITAKA USNRL CLIMAX MT WILSON CLIMAX HAWAII CLIMAX MT WILSON	03	1814	1836	N13 W50	4337	22	1							S-SWF	
	04	1138 E		S20 E03	4340		16	2	1138	4.50					
	04	1147 E	1205 D	S19 W03	4340	18 D	1								
	04	1350	1416	S11 E90	4355	26	1	2	1352	.45	4.00	1.0	5		
	04	2029	2235 D	S15 E30	4348	126 D	16								
	04	2128	2253 D	S17 E32	4348	85 D	2			8.20					
	05	0556	0630 D	S13 E76	4355	34 D	1	1	0556	2.78	11.00	4.86			
	05	1454	1530	S20 E21	4348	36	16								
	05	1526 E	1712	S15 E24	4348	106 D	2	1		9.80					
	05	1632	1642	N22 W28	4338	10	1								
	05	1959	2009	N13 E17	4347	10	1			2.20					
	05	2012 E	2022	N19 E23	4347	10 D	1	1	2014	2.90	3.30				
05	2013	2038 D	N12 E22	4347	25 D	1			2.40						
05	2014	2035	N13 E20	4347	21	1					PAGE	1			

SOLAR FLARES

JANUARY 1958

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION -- MINUTES	IM- POR- TANCE	OBS. COND.	TIME -- UT	MEASUREMENTS			PROVISIONAL IONOSPHERIC EFFECT	
		START	END	APPROX.						MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H _o		MAX. INT. %
				LAT.	MER. DIST.									
{ HAWAII MT WILSON	05 2034 E	2042		N21 W32		4336	8 D	1	2034	2.10	2.70			
	05 2035	2042		N22 W30		4336	7							
	06 1252 E	1343		N11 E12		4347	51 D	2	1259	2.70	2.90	1.00	134	
	06 1359	1409		N12 E11		4347	10	3	1400	1.02	1.07		104	
	06 1611	1616		N15 E13		4347	5	2	1612	1.93	2.32		99	
	06 1704	1717		N14 E11		4347	13	1	1705	1.47	1.59	1.00	118	
	06 1908	2010		S17 E08		4348	62	1		4.80				
	06 1910	2005 U		S15 E06		4348	55 U	2		2.80			16	
	06 1917 E	2025		S06 E07		4348	68 D	1	1923	3.41	3.54	1.00	88	
	06 2122	2145		S18 E49		4356	23	1		3.80				
{ MITAKA MITAKA MITAKA CLIMAX SAC PEAK HAWAII HAWAII CLIMAX MT WILSON SAC PEAK CLIMAX HAWAII	06 2122	2147 U		S18 E47		4356	25 U	2		2.60			24	
	07 0304 E	0313		S18 E41		4356	9 D	1	0305	.89	1.25	2.29	96	
	07 0315	0322		S16 E45		4356	7	1	0315	1.86	2.68	1.98	107	
	07 0413	0434		S16 E44		4356	21	1	0423	1.84	2.65	1.70	122	
	07 1820	1910	1842	S18 E39		4355	50	2		10.00				
	07 1825	1925 U		S18 E38		4355	60 U	2		8.30			18	
	07 1826	1904 D		S08 E42		4355	38 D	2	1835	12.40	17.00			
	07 1855	1940	1902	N11 W00		4347	45	2		3.80			20	
	07 1856	1938 D		N10 W09		4347	42 D	2	1901	6.20	6.50			
	07 1901	1924	1907	N12 W02		4347	23	1		3.60				
{ MT WILSON SAC PEAK CLIMAX HAWAII MITAKA OTTAWA	07 1911 E			N12 W00		4347	10	2		2.20			15	
	07 2210	2220	2215	S41 E07		4357	12	1	2214	2.70	2.10			
	07 2210	2222		S41 E09		4357	8	1		1.70				
	07 2212	2220	2214	S43 E05		4357								
	08 0141	0151		S13 E48		4355	10	2	0144	1.84	2.76	1.60	96	
	08 1821		1833	N27 E21		4355	1	1	1833	2.55	3.23			
	09 0216	0230		N12 W21		4347	14	1	0216	7.57	8.33	1.87	149	
	09 1321	1422		N11 W25		4347	61	2	1328	3.04	3.51		132	
	09 1506	1524	1521	S10 E25		4355	18	1	1521	1.98	2.26		90	
	09 2307	2332		N10 W30		4347	25	1						
{ MT WILSON HAWAII MITAKA MITAKA UCCLE UCCLE UCCLE UCCLE UCCLE UCCLE WENDEL WENDEL WENDEL	09 2312	2338	2318	N15 W36		4347	26	1		3.10	4.10			
	10 0303 E	0312		S15 E53		4360	4 D	1	0308	1.34	2.28	2.27		
	10 0438 E	0445 D		S16 E64		4360	7 D	1	0438	1.44	3.13	1.89		
	10 0841	0909	0848	N11 W41		4347	28	1	0848	2.20	2.60			
	10 0843	1000	0903	S15 E18		4355	77	3	0903	5.10	5.30			
	10 0907	0946	0929	S17 W43		4348	39	3	0929	4.50	5.60			
	10 0918	0933	0926	N18 E90		4370	15	3	0926	2.80	6.20			
	10 0927	0942	0931	S17 E17		4355	16	2	0931	4.00	6.80			
	10 0947	1010	0958	S10 E87		4363	25	3	0958	5.60	10.40			
	10 1029	1117	1047	N12 W42		4347	88	3	1047	3.40	4.20			
{ UCCEL UCCEL UCCEL UCCEL UCCEL UCCEL UCCEL UCCEL UCCEL UCCEL	10 1032	1102	1043	N25 E45		4359	30	2		5.10	7.60			
	10 1034	1120	1041	S38 W27		4357	46	3	1043	4.50	5.50			
	10 1043	1101	1051	N37 W18		4367	18	3	1051	4.50	6.30			
	10 1106	1151	1108	S15 E11		4355	45	1	1108	3.40	3.50			
	10 1312	1329		S27 W01		4351	17	1		3.00	3.00			
	10 1321	1333		S13 E15		4355	12	1	1324	2.00	4.00			
	10 1321	1342		S15 E20		4355	21	1		4.00	4.00			
	10 1414	1428		N25 W69		4345	14	1		4.00	4.00			
												PAGE	2	

SOLAR FLARES

JANUARY 1958

OBSERVATORY	DATE Jan. 1958	OBSERVED UNIVERSAL TIME		LOCATION			DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS				PROVISIONAL IONOSPHERIC EFFECT
		START	END	APPROX. LAT.	M-MATH PHASE REGION	TIME — U T				MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H _a	MAX. INT. % H _a	
{ARCETRI ARCETRI CLIMAX	10	1415	1427	N25 W69	4345	12	16	2						
	10	1423	1433	N13 W30	4347	10	1	2						
	10	2120	2144	S12 E06	4355	24	1			2.30				
{HUANCAYO {SAC PEAK ARCETRI CLIMAX	11	1553 E	1603 D	N16 E56	4364	10 D	1	3						
	11	1722	1742	S16 W03	4355	20	1							
	11	1725	1737	S15 W02	4355	12	1	2		2.40			22	
{MT WILSON MT WILSON {SAC PEAK MT WILSON	11	1810	1836	S15 W01	4355	26	1							
	11	1902	1947	S09 W03	4355	45	1	2		4.20			20	Slow S-SWF
	11	1905	1944	S12 W05	4355	39	1							
{R O HERST {R O EDIN NEDERHORST	13	1047 E	1115	N12 E45	4370	28 D	1	1	1055	1.10	2.30	1.66	63	S-SWF
	13	1258 E	1420	S20 E27	4365	82 D	16	2	1300	10.00	11.50	1.96		
	13	1300 E	1315	S20 E26	4365	15 D	2							
{UTRECHT UCCLE HUANCAYO	13	1300 E	1315 D	S20 E26	4365	15 D	2							
	13	1315 E	1335 D	S19 E28	4365	20	3	2	1318	28.00	31.00			S-SWF
	13	1614	1625	N25 E05	4359	11	1	2					17	
{SAC PEAK SAC PEAK MT WILSON	13	2042	2100	N23 W05	4359	18	1	2		2.30				
	13	2231	2243	N14 E45	4370	12	1							
	14	1351	1400 D	S13 W41	4360	9 D	1				4.00			
{SAC PEAK SAC PEAK {MT WILSON	14	1555	1900	S13 W46	4355	185	1	2		3.30			18	Slow S-SWF
	14	2142	2215	S18 W42	4355	33	1	2		2.60			25	
	14	2145	2215	S18 W39	4355	30	16							
{NIZAMIAH CAPRI S ARCETRI	15	0509 E	0553	S11 W54	4355	44 D	16	2	0526	3.04	5.18	1.60		Slow S-SWF
	15	0923	0947	N18 E36	4370	24	1	2	0925	2.00	2.60			S-SWF
	15	0945	1135	N19 E30	4370	110	16	2						
{CAPRI S CAPRI S CAPRI S	15	1017 E	1032	S13 W54	4355	15 D	1	2	1022	1.50	2.70			
	15	1017 E	1121	N19 E34	4370	64 D	1	2	1032	2.00	2.60			
	15	1341 E	1738	N17 E12	4364	58	1	3	1341	2.50	2.70			
{CLIMAX HUANCAYO {SAC PEAK MT WILSON	15	1640	1738	S12 W59	4355	58	2	2	1651	11.10				
	15	1640 E	1745 D	S14 W57	4355	65 D	3	2		7.70			28	S-SWF
	15	1640	1757 D	S18 W60	4355	77 D	2	2						
{MC MATH MT WILSON MT WILSON	15	1641	1735 D	S12 W60	4355	50 D	2	2						
	15	1645 E	1735 D	S12 W55	4355	50 D	2	2						
	15	2044	2049	S06 E01	4368	5	1							
{MT WILSON MT WILSON {HAWAII	15	2214	2232	N18 W28	4359	18	1							
	15	2306	2322	N14 E22	4370	16	1							
	15	2306	2322	N15 E31	4370	16	1	3	2308	2.90	3.60			
{MITAKA MITAKA MITAKA	16	0054	0103	S13 W65	4355	9	1	1	0056	1.84	3.92	3.97	120	S-SWF
	16	0507	0525	S13 W67	4355	18	1	1	0515	1.34	2.85	2.85	120	S-SWF
	16	0527	0545	N17 E23	4370	18	1	1	0529	1.34	1.60	1.66		
{NIZAMIAH CAPRI S CAPRI S	16	0927 E	0940 D	S15 E37	4377	33 D	1	2	0930	1.21	2.23	2.10		
	16	0928	0934 D	S09 E51	4377	6 D	1	3	0930	1.50	2.40			
	16	1208	1225	S13 W65	4355	17	1	3	1211	1.20	2.90			S-SWF
{CAPRI S CAPRI S {CLIMAX	16	1414 E	1441	N18 E26	4375	27 D	16	3	1422	4.30	4.70			S-SWF
	16	1542 E	1555 D	N22 E32	4375	13 D	1	2	1544	3.50	4.50			
	16	1542 E	1610	N22 E28	4375	28 D	1		1542	2.80				Slow S-SWF
{CLIMAX CLIMAX MT WILSON	16	1805	1817	N25 E85	4381	12	1							
	16	1951	2010	N14 E02	4370	19	1							
	16	2100	2121	N16 E01	4370	21	1					PAGE	3	

SOLAR FLARES

JANUARY 1958

OBSERVATORY	DATE	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION — MINUTES	IN- FOR- TANCE	OBS. COND.	MEASUREMENTS			PROVISIONAL IONOSPHERIC EFFECT		
		START	END	APPROX. LAT.	MATH PLAGE REGION				TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.		MAX. WIDTH Ha	MAX. INT. %
MT WILSON CLIMAX MT WILSON	16	2202	2230	N16 E01	4370	28	1			6.40				
	16	2255	2326 D	S16 E48	4377	31 D	2							
	16	2300	2347	S15 E46	4377	47	1							
	17	0026	0041	N13 E04	4370	15	1	1	0027	1.86	1.97	1.86	120	
	17	0040	0055	N08 E03	4370	15 D	1	1	0051	1.84	1.90	2.33	134	
	17	0130	0130	S14 W62	4355	13	1	1	0130	1.84	3.83	2.74	149	
	17	0208	0216	N13 E10	4370	8	16	1	0208	2.78	2.98	1.92	188	
	17	0223	0231	S18 W70	4355	8 D	1	1	0223	1.84	4.60	1.54		
	17	0235	0251	N08 E03	4370	16	1	1	0235	1.84	1.90	2.09	107	
	17	0818	0840	N24 W45	4359	22	1	3	1145	4.00	4.20	2.30		
R O EDIN CAPRI S R O EDIN ARCETRI ARCETRI ZURICH ZURICH R O EDIN CLIMAX MT WILSON CLIMAX	17	1139	1151	N12 E07	4370	12	1	3	1212	1.20	3.80			
	17	1154	1220 D	N27 E70	4381	26 D	1	3	1159	3.00	8.80	2.25		
	17	1155	1250	N23 E65	4381	55	16	3						
	17	1205	1222	S25 E69	4381	17 D	16	1						
	17	1205	1220	S21 E18	4373	15 D	1	1						
	17	1255	1339	N08 W03	4368	44 D	16	1	1255	2.00	4.10	2.90		
	17	1300	1307 D	N09 W04	4368	7 D	1	1	1303	4.00				
	17	1742	1753	N25 E68	4381	11 D	1	1	1303	2.90				
	17	2016	2025	N30 E60	4376	9	1	1	1747					
	17	2117	2210	N22 E62	4381	53	1	1		2.60				
MITAKA HAWAII HUANCAYO MT WILSON UCCLE UCCLE USNRL USNRL OTTAWA R O HERST R O EDIN USNRL USNRL MT WILSON	18	0517	0531	N17 W02	4370	14	1	1	0518	1.86	2.02	2.27	149	
	18	2254	2314	S12 W32	4368	20	1	1	2254	2.40	2.80			
	19	1629	1634	N10 W34	4370	5	1	2						
	19	2018	2100	N35 E15	4376	42	1	1						
	20	0842	0848	N25 E30	4381	6 D	1	2	0845	2.20	2.40			
	20	0844	0851 D	N09 W43	4370	7 D	16	2	0851	3.40	4.20			
	20	1322	1400	N10 W43	4370	38	1	3	1329	.79		2.00	102	
	20	1435	1601	N27 E44	4381	86	26	3	1505	4.29	7.16	2.00	160	
	20	1446	1552	N28 E42	4381	66	2	4	1509	7.60	12.59			
	20	1449	1525	N28 E46	4381	36 D	26	2	1458	3.40	6.10	3.80	150	
R O EDIN USNRL USNRL MT WILSON MITAKA MITAKA ATHENS WENDEL UCCLE UCCLE UCCLE UCCLE CLIMAX USNRL MITAKA NIZAMIAH	20	1507	1518 D	N28 E46	4381	11 D	2	2	1511	9.00	15.60	2.50		
	20	1621	1629	N31 W70	4359	8	1	1	1625	.56	2.48		64	
	20	1708	1747	N10 W45	4370	39	1	1	1713	.64			111	
	20	2058	2119	N28 E28	4381	21	1	3	1713	.45	.64			
	22	0247	0304	N28 E12	4381	17 D	16	1	0247	3.80	4.52	1.72	165	
	22	0315	0324	S19 E56	4384	9 D	16	1	0315	5.67	11.30	2.39	149	
	22	0810	0840 D	N17 W72	4364	30 D	2	3		2.20	7.00			
	22	0929	0941	S27 W32	4372	12	1	1		3.00				
	22	0951	1107	N29 E25	4381	76 D	16	2	1035	3.40	4.2			
	22	0951	1112	N25 W12	4376	81 D	1	2		2.20				
UCCLE UCCLE UCCLE UCCLE CLIMAX USNRL MITAKA NIZAMIAH	22	0951	1115 D	S27 W35	4372	84 D	16	2	1107	4.50	4.90			
	22	1012	1108	S17 E54	4384	56	1	2	1104	2.20	3.30			
	22	1056	1112	S15 W27	4377	16	1	2	1106	3.40	3.70			
	22	1802	1901	S24 W38	4372	59	2	3	1106	7.20				
	22	1811	1937	S24 W37	4372	86 D	16	2	1821	3.06	4.00		123	
	23	0102	0113	S16 E44	4384	11	1	1	0107	.89	1.32	2.19	120	
	23	0520		N W			1	1	0520			1.50	4	
												PAGE		

SOLAR FLARES

JANUARY 1958

OBSERVATORY	DATE JAN. 1958	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	TIME — U T	MEASUREMENTS			PROVISIONAL IONOSPHERIC EFFECT	
		START	END	APPROX. LAT.	MER. DIST.					MAGNITUDE PLAGE REGION	MEAS. AREA Sq. Deg.	CORR. Sq. Deg.		MAX. WIDTH Ha
{ WENDEL NEDERHORST UCCLE WENDEL USNRL WENDEL AT WILSON USNRL HUANCAYO AT WILSON	23	0904	1053	S22 W45	4372	W45	109	3			19.00		Slow S-SWF	
	23	0919 E	0945	S22 W47	4372	W47	26 D	2						
	23	0928 E	1024	S28 W48	4372	W48	56 D	4	0933	11.00	15.00			
	23	1328	1344	S25 W48	4372	W48	16	1			3.00			
	23	1329	1349	S28 W48	4372	W48	20	2	1331	1.92	3.00	85		
	23	1355	1415 D	S15 E35	4384	E35	20 D	16			6.00			
	23	1919	2019	S20 W10	4378	W10	60	16						
	23	1945	2026	S12 W13	4378	W13	41	16						
	23	1946	2000	S09 W11	4378	W11	14	1	1950	3.85	3.96	106		
	23	2119 E		N30 E05	4381	E05		16						
{ NIZAMIAH MITAKA WENDEL ARCTRI R O EDIN CAPRI S R O HERST	24	0334	0424	S23 W55	4372	W55	50	1			2.15	1.70	Slow S-SWF	
	24	0348	0433 D	S23 W57	4372	W57	45 D	1	0347	3.80	7.15	1.97		125
	24	0812	0842 D	S24 W63	4372	W63	30 D	16	0404		5.00			
	24	0858	0954 D	S22 W61	4372	W61	56 D	16			6.00			
	24	0903	0926	S23 W60	4372	W60	23	1	922	1.30	2.60			
	24	1243	1307	S14 E20	4384	E20	24	1	1244	4.50	4.90	1.87		
	24	1320	1420 D	S16 E23	4384	E23	60 D	1	1244	2.20	2.40			
	24	1333 E	1415	S19 E23	4384	E23	42 D	16	1327	1.90	2.10	80		
	24								1335					
	24													
{ HAWAII MITAKA ARCTRI WENDEL ARCTRI WENDEL UCCLE ABASTUMANI NIZAMIAH UCCLE WENDEL ZURICH ARCTRI CAPRI S NEDERHORST STOCKHOLM ARCTRI R O HERST	25	0040 E	0104	N30 W12	4381	W12	24 D	1			3.10	2.32	Slow S-SWF	
	25	0040	0105	N28 W13	4381	W13	25	26	0042	2.50	19.20	2.32		183
	25	0839 E		N20 E68	4387	E68	11 D	1	0045	15.20	3.20			
	25	0845 E	0856	N25 E68	4387	E68	8 D	1	839	1.10	3.00			
	25	0843 E	0851 D	S12 W34	4378	W34	40 D	16	843	1.80	2.20			
	25	0845 E	0925	S12 W31	4378	W31	40 D	16		2.20	5.00			
	25	0853 E	0907 D	S11 W36	4378	W36	14 D	1	0907	3.20	3.80			
	25	0925	1046	S W	4372	W	81	3						
	25	0927	1029	S21 W69	4372	W69	62	2	0950	2.43	6.73	2.54		
	25	0930	1045	S25 W70	4372	W70	75	3	0942	10.00	20.00			
{ WENDEL ZURICH ARCTRI CAPRI S CAPRI S NEDERHORST STOCKHOLM ARCTRI R O HERST UCCLE ZURICH WENDEL ABASTUMANI CAPRI S WENDEL	25	0930	1100 D	S23 W66	4372	W66	90 D	3			23.00		Slow S-SWF	
	25	0934	1046 D	S25 W68	4372	W68	72 D	2	0934		8.00			
	25	0935	1038	S23 W74	4372	W74	63	3	0934	4.10	14.00			
	25	0936 E	1046	S25 W68	4372	W68	70 D	2	1009	3.00	7.50			
	25	0936 E	1050	S25 W70	4372	W70	74 D	26	1011					
	25	0944 E	1040 D	S22 W70	4372	W70	56 D	26						
	25	0947 E		S22 W68	4372	W68	38 D	2	947	2.70	7.30			
	25	0954 E	1032 D	S24 W70	4372	W70	38 D	2	1010	2.40	6.90			
	25	0958	1019	N25 W57	4376	W57	21	2	1005	5.00	8.00			
	25	1000	1011 D	N22 W55	4376	W55	11 D	1	1000		3.00			
{ WENDEL ABASTUMANI CAPRI S WENDEL	25	1001	1022 D	N25 W47	4376	W47	21 D	16			6.00		S-SWF	
	25	1005	1028	N W	4376	W	23	2						
	25	1203	1244 D	S21 E11	4384	E11	39 D	16	1230	3.80	4.20	20.00		
	25	1205	1333	S18 E12	4384	E12	88	3						
	26	0115 E	0127 D	N19 E56	4387	E56	12 D	1	0115	.89	1.85	2.56		120
	26	0138 E	0226	N21 E54	4387	E54	48 D	1	0156	.89	1.85	2.40		131
	26	0210 E	0226	N20 E56	4387	E56	16 D	1	0210	1.84	3.83	1.81		102
	26	0441	0458	N21 E52	4387	E52	17	1	0443	.89	1.78	2.64		107
	26	0503	0516	S17 W05	4382	W05	13	1	0503	1.84	1.87	2.39		140
	26	0913 E	0958	S11 E25	4384	E25	45 D	16			5.00			Slow S-SWF
26	1310 E	1418 D	S10 E22	4384	E22	68 D	16			6.00				
26	1314 E	1429	N11 E22	4386	E22	75 D	16	1322	1.92	2.10	1.00	105		
26											PAGE	5		

SOLAR FLARES

JANUARY 1958

OBSERVATORY	DATE Jan. 1958	OBSERVED UNIVERSAL TIME		LOCATION		DURA- TION — MINUTES	IM- POR- TANCE	OBS. COND.	MEASUREMENTS			PROVISIONAL IONOSPHERIC EFFECT		
		START	END	APPROX. LAT.	MER. DIST.				MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H ₃₀₀₀		MAX. INT. %	
WENDEL CLIMAX HAWAII HAWAII	26	1355 E	1418 D	N21 E50	4387	23 D	1				3.00		S-SWF	
	26	1640	1657	N21 E50	4387	17	1	3	1838	2.80	3.00			
	26	1836	1906	N24 W39	4381	30	1			2.00	3.00			
	26	2208	2220	N24 E49	4387	12	16			4.10	7.80			
{HAWAII MITAKA MITAKA MITAKA	27	0030	0054	N25 E49	4387	24	1	3	0032	2.50	4.70		S-SWF	
	27	0034	0043	N23 E47	4387	9	16	1	0034	5.67	9.60	1.58		134
	27	0146	0202 D	S10 E17	4384	16 D	1	1	0146	2.78	2.95	1.92		110
	27	0316 E	0329	S10 E16	4384	13 D	1	1	0316	2.78	2.95	3.00		120
MITAKA ZURICH WENDEL MT WILSON	27	0323 E	0329	N22 E46	4387	6 D	1	1	0328	.41	.69	1.97	96	
	27	1046	1128 D	S11 E10	4384	40 D	1	3	1055		2.00			
	27	1350	1413	S19 W53	4378	23	1				3.00			
	27	2246	2319	S26 E66	4397	33	1							
UCCLE UCCLE WENDEL USNRL	28	1008	1052	S10 W02	4384	44	1	2	1019	2.80			Slow S-SWF	
	28	1053	1203 D	N24 E29	4387	10 D	16	3	1106	2.80	3.50			
	28	1213 E	1239	S09 W03	4384	26 D	16				6.00			
	28	1337	1425	N19 E43	4388	48	16				7.00			
{USNRL UCCLE USNRL	28	1343 E	1439	N21 E42	4388	56 D	1	2	1347	1.47	2.29	1.00	87	
	28	1406 E	1417	N19 E39	4388	11 D	1	3		3.00	4.20			
	28	2040	2100	S26 E70	4397	20	1	2	2045	1.36	3.60		63	
	29	1118	1147	S10 W18	4384	29	1	3	1125	1.80				
SAC PEAK ATHENS MT WILSON	29	1602	1637	N12 E60	4394	35	1	1		2.50		16	Slow S-SWF	
	30	0709	0751	S18 W54	4382	42	1	3		2.00	3.40			
	30	0904 E		S19 W65	4382		2							
	30	1750	1945 U	S15 W60	4382	115 U	2	1		6.70		17		
SAC PEAK SAC PEAK SAC PEAK	30	1828 E	2015	S18 W65	4382	107 D	26	2	1842	2.26	5.19		S-SWF G-SWF	
	30	2020	2112 D	S16 W66	4382	52 D	1	1		2.90		16		
	31	0137 E	0203 D	S20 W63	4382	26 D	1	1	0137	4.70	9.76	2.32	Slow S-SWF	
	31	1148	1356	N10 W20	4387	128	26							
{MOSCOW WENDEL CAPRI S USNRL	31	1155 E	1405	N20 W13	4387	130	3				20.00			
	31	1226 E	1319	N21 W13	4387	53 D	1	1	1242	3.80	4.20			
	31	1231 E	1452	N19 W12	4387	141 D	26	1	1234	5.89	6.89			
	31	1200 E	1320	N22 E14	4392	80 D	26							
KANZELHOE UCCLE	31	1435 E	1503 D	S17 W80	4382	28 D	1					124	Slow S-SWF	
	31	1503 E		S05 E05	4391		16							

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COMMERCE - STANDARDS - BOULDER

* RATED AS IMPORTANCE 1- BY OTHER OBSERVATORIES.

SAC PEAK: ALL VALUES IN MAX. INT. COLUMN ARE ARBITRARY UNITS (0-40), NOT PERCENT OF CONTINUOUS SPECTRUM.

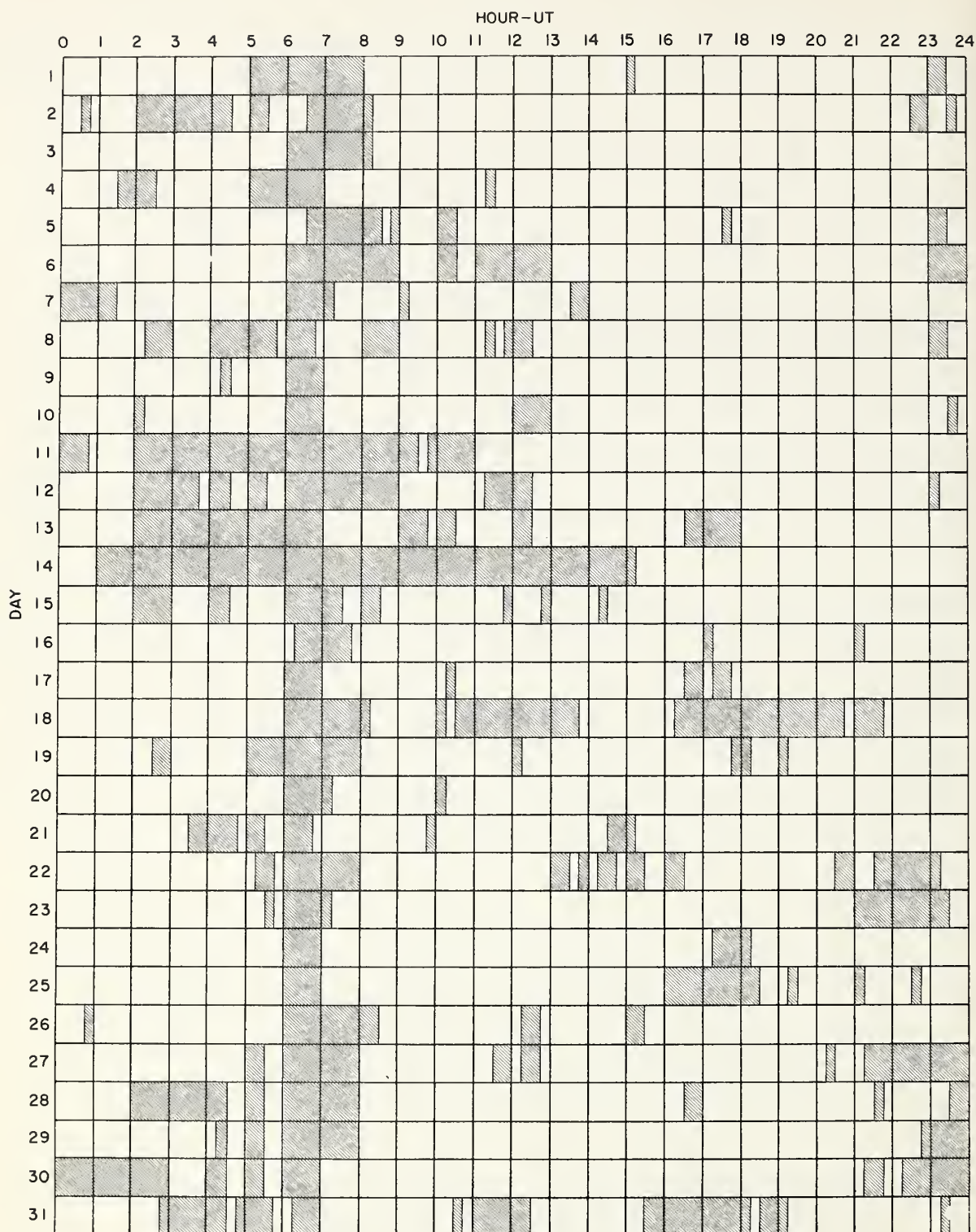
E - LESS THAN
D - GREATER THAN
U - APPROXIMATE
+ - PLUS
- - MINUS

ANACAPRI SWEDISH
KODAIKANAL
KRASNAYA PAKHRA
ROYAL OBSERVATORY, EDINBURGH
GREENWICH ROYAL OBSERVATORY, HERSTMONCEUX
SACRAMENTO PEAK
SCHAUINSLAND
UNITED STATES NAVAL RESEARCH LABORATORY

CAPRI S
KODAIKANAL
KRASNAYA
R O EDIN
R O HERST
SAC PEAK
SCHAUINS
USNRL

INTERVALS OF NO FLARE PATROL OBSERVATIONS

JANUARY 1958



Stations included:

COMMERCE - STANDARDS - BOULDER

Anacapri (Swedish)
Arcetri
Arosa
Athens
Climax
Dunsink

Greenwich Royal Observatory,
Herstmonceux
Hawaii
Huancayo
Mitaka
Nizamia

Ottawa
Royal Observatory, Edinburgh
Sacramento Peak
Uccle
U. S. Naval Research Laboratory
Zurich

SUBFLARES NOTED AS FOLLOWS: DATE - UNIVERSAL TIME - COORDINATES

DECEMBER 1957

UCCLE	01	0900	E	S09 W15	SAC PEAK	09	2042	S15 E16
UCCLE	01	0900		S08 W65				
UCCLE	01	0938		S09 W15	UCCLE	10	0945	S16 E11
UCCLE	01	0946		S09 W15	SAC PEAK	10	1612	N12 E07
UCCLE	01	1016		S09 W15	SAC PEAK	10	2010	N11 E04
*SAC PEAK	01	1550		S16 W27				
SAC PEAK	01	1630		S30 E25	SAC PEAK	11	2040	N08 W61
SAC PEAK	01	1640		S28 E60				
CLIMAX	01	1730		S31 E25	*USNRL	12	1310	E S23 E70
SAC PEAK	01	1730		S29 E25	*SAC PEAK	12	1610	S27 E70
CLIMAX	01	2040		S21 E29	SAC PEAK	12	1735	S16 E90
SAC PEAK	01	2042		S22 E27	SAC PEAK	12	1832	N05 W31
					CLIMAX	12	1835	E N05 W30
MEUOON	02	1055		S16 W33	CLIMAX	12	1843	N16 W47
HUANCAYO	02	1607		S13 E10	USNRL	12	1848	N15 W47
USNRL	02	1607		S14 E09	SAC PEAK	12	1850	N17 W49
USNRL	02	1711		S18 W40	*SAC PEAK	12	1905	N31 W28
USNRL	02	1750		S20 W40	*CLIMAX	12	1907	N22 W30
USNRL	02	1819		N25 W61	*SAC PEAK	12	1957	N28 W57
					*SAC PEAK	12	2050	S16 E90
UCCLE	03	0939		S22 W09	*USNRL	12	2051	S15 E88
UCCLE	03	0948		N16 W35	CLIMAX	12	2051	E S15 E90
HYOERABAO	03	1021	E	S18 W50	SAC PEAK	12	2152	N06 W34
UCCLE	03	1050		N16 W35				
*R O HERST	03	1205	E	S17 W48	ATHENS	13	0741	N07 W22
UCCLE	03	1219	E	S16 W05	USNRL	13	1416	S12 E33
OTTAWA	03	1340		S20 E04	USNRL	13	1455	S12 E33
OTTAWA	03	1355		S15 W03	USNRL	13	1534	E N23 E90
*SAC PEAK	03	1516	E	S19 E00	USNRL	13	1605	S12 E33
SAC PEAK	03	1535		S17 W52	CLIMAX	13	1616	N21 E90
*OTTAWA	03	1543		S20 W49	*USNRL	13	1626	N23 E90
*CLIMAX	03	1548		S18 W56	*SAC PEAK	13	1630	N21 E90
*USNRL	03	1632	E	S17 W52	SAC PEAK	13	1822	N21 E90
SAC PEAK	03	1705		S17 W52	CLIMAX	13	1825	N21 E90
*SAC PEAK	03	1805		S24 W04	*SAC PEAK	13	1947	S17 E77
SAC PEAK	03	1805		S18 W55				
SAC PEAK	03	1935		S22 W14	CAPRI S	14	0849	E N09 W45
HUANCAYO	03	1945		S15 W53	SAC PEAK	14	1525	S12 W17
SAC PEAK	03	2000		S18 W55	USNRL	14	1532	E S13 W17
SAC PEAK	03	2042		S18 W55	SAC PEAK	14	1542	N18 E80
SAC PEAK	03	2110		S22 W01	USNRL	14	1545	N11 W48
CLIMAX	03	2112		S22 E01	SAC PEAK	14	1637	N18 E75
SAC PEAK	03	2125		N16 W43	CLIMAX	14	1823	S12 W18
CLIMAX	03	2127		N17 W44	CLIMAX	14	1826	N06 W60
					SAC PEAK	14	1952	N20 E78
UCCLE	04	1139		S25 E85	SAC PEAK	14	2035	N17 W74
SAC PEAK	04	1507		S17 W68	CLIMAX	14	2040	N16 W73
SAC PEAK	04	1520		S21 W16				
SAC PEAK	04	1537		N25 E56	USNRL	15	1434	S14 E47
SAC PEAK	04	1607		S17 E85	USNRL	15	1500	N17 E60
*SAC PEAK	04	1655		S21 W20	USNRL	15	1506	S12 E55
SAC PEAK	04	1750		S17 W69	HUANCAYO	15	1546	E N12 E56
SAC PEAK	04	1807		S15 W64	HUANCAYO	15	1615	E N18 E68
SAC PEAK	04	1927		S16 W70				
CAPRI S	05	0930	E	S21 W31	ONOREJOV	16	0939	S25 E22
OTTAWA	05	1420		S15 W30	ONOREJOV	16	1046	E S25 E22
*OTTAWA	05	1425		S14 W62	ONOREJOV	16	1350	E S12 E40
*USNRL	05	1538	E	S17 E81	USNRL	16	1449	N23 E13
USNRL	05	1543		N16 W17	SAC PEAK	16	1515	S26 E17
OTTAWA	05	1544		N16 W17	OTTAWA	16	1541	S19 E83
USNRL	05	1556		S31 W90	SAC PEAK	16	1615	N07 W90
USNRL	05	1735		N18 W19	SAC PEAK	16	1637	S26 E17
					SAC PEAK	16	1705	N19 E52
*R O EDIN	06	1247		S15 W74	SAC PEAK	16	1712	S26 E16
HUANCAYO	06	1533		S32 W04	SAC PEAK	16	1715	N05 W90
HUANCAYO	06	1539		S20 W36	USNRL	16	1717	E S25 E17
SAC PEAK	06	1755		S24 E60	HAWAII	16	1944	S28 E14
SAC PEAK	06	1800		S14 W80	HUANCAYO	16	1948	E S26 E15
SAC PEAK	06	1827		S13 W47	USNRL	16	1949	E S25 E17
*SAC PEAK	06	1842		S14 W80	USNRL	16	2022	N15 E45
*SAC PEAK	06	1910		S22 W50	SAC PEAK	16	2115	S14 E33
*HUANCAYO	06	1955	E	S32 W05				
SAC PEAK	06	2010		S35 E64	*HAWAII	17	0040	N12 E44
					*R O HERST	17	0850	E N22 E41
*ATHENS	07	0808		S20 E30	*HYOERABAO	17	0907	E N17 E39
*CAPRI S	07	0809		S17 E30	WENOEL	17	1103	E S25 W11
*ATHENS	07	0847	E	N15 E27	WENOEL	17	1128	E S06 E45
SAC PEAK	07	1508	E	S20 E27	WENOEL	17	1206	E S11 E24
*SAC PEAK	07	1610		N06 W02	USNRL	17	1314	S26 E88
*SAC PEAK	07	1625		S12 W60	USNRL	17	1325	S05 E43
SAC PEAK	07	1805		S19 E25	USNRL	17	1430	S05 E43
SAC PEAK	07	1945		S18 E24	USNRL	17	1514	N24 E90
SAC PEAK	07	2050		N23 E11	CLIMAX	17	1546	E S28 E82
SAC PEAK	07	2122		S13 W90	USNRL	17	1552	S22 E90
					USNRL	17	1608	N21 E47
UCCLE	08	1310		S20 W77	USNRL	17	2010	S20 E90
UCCLE	08	1310		S24 E23	USNRL	17	2038	N20 E30
*SAC PEAK	08	1503	E	S15 W80	HAWAII	17	2138	N17 E37
HUANCAYO	08	1535	E	N06 W17				
SAC PEAK	08	1635		N18 E19	ATHENS	18	0713	S24 W22
SAC PEAK	08	1650		N18 E19	SAC PEAK	18	1535	E N22 E16
SAC PEAK	08	1650		N14 E67	SAC PEAK	18	1555	N26 E90
SAC PEAK	08	1922		S15 W80	HAWAII	18	1854	N12 W49
SAC PEAK	08	2155		N13 E63	SAC PEAK	18	2120	E N26 E90
SAC PEAK	08	2212		S15 W80				
ONOREJOV	09	0928	E	S12 W72	MEUOON	19	0915	E N24 E20
SAC PEAK	09	1457	E	N07 W27	MEUOON	19	1155	N17 E40
SAC PEAK	09	1457	E	S14 W90	SAC PEAK	19	1952	S27 E66
SAC PEAK	09	1600		S11 W78	USNRL	19	1952	S24 E68
HUANCAYO	09	1603	E	N08 W73	SAC PEAK	19	2057	N18 E44
SAC PEAK	09	1705		S11 W78	SAC PEAK	19	2135	S18 E78
SAC PEAK	09	1802		S11 W90				
SAC PEAK	09	1920		S11 W78	*CAPRI S	20	0857	E N17 W06
SAC PEAK	09	1927		N18 E04	WENOEL	20	1157	E N14 W05
					SAC PEAK	20	1510	S18 W25
					SAC PEAK	20	1525	N27 E14
					SAC PEAK	20	1622	S27 E50

SUBFLARES NOTED AS FOLLOWS, DATE - UNIVERSAL TIME - COORDINATES

DECEMBER 1957

SAC PEAK	20	1625	N27 E14
SAC PEAK	20	1625	S19 E86
SAC PEAK	20	1750	N23 E44
SAC PEAK	20	1755	N15 E30
SAC PEAK	20	1919	S23 E58
HUANCAYO	20	1927 E	S21 E51
HAWAII	20	2006	N22 E61
* SAC PEAK	20	2017	N14 E23
SAC PEAK	20	2020	S18 W28
* SAC PEAK	20	2107	S13 W15
* HUANCAYO	20	2112	S14 W14
HUANCAYO	20	2136	S07 E90
SAC PEAK	20	2150	S23 E39
HUANCAYO	20	2152	S23 E39
WENDEL	21	1007 E	S13 W35
WENDEL	21	1041 E	S20 W72
* WENDEL	21	1320 E	S13 W39
* USNRL	21	1324	S15 W38
WENDEL	21	1400 E	N17 E20
USNRL	21	1437	S20 W37
USNRL	21	1457	N14 W21
SAC PEAK	21	1502	N14 W21
SAC PEAK	21	1502	N29 E48
USNRL	21	1542	N22 E344
* SAC PEAK	21	1612	S17 W38
* CLIMAX	21	1615	S18 W39
* CLIMAX	21	1639	S17 E69
CLIMAX	21	1715	N14 E17
* CLIMAX	21	1730	N30 E55
SAC PEAK	21	1812	S12 W42
HUANCAYO	21	2020 E	S15 E69
* CLIMAX	21	2044	N29 E46
* SAC PEAK	21	2045	N26 E46
* SAC PEAK	21	2055	N16 W25
* CLIMAX	21	2056	N17 W26
SAC PEAK	21	2107	N15 E30
HUANCAYO	21	2108	N25 E29
* SAC PEAK	21	2127	N25 E31
* CLIMAX	21	2133 E	N28 E31
* CLIMAX	21	2201	N28 E00
WENDEL	22	1212 E	N23 W58
WENDEL	22	1232 E	S18 W41
WENDEL	22	1238 E	S21 E12
UCCLE	22	1333	S25 E29
* WENDEL	22	1335 E	N23 E24
* USNRL	22	1335	N23 E22
USNRL	22	1357	S15 W37
UCCLE	22	1358	S13 W52
WENDEL	22	1359 E	N16 W31
USNRL	22	1400	N14 W33
UCCLE	22	1401	N16 W35
USNRL	22	1435	N23 E22
USNRL	22	1436	S23 E18
* SAC PEAK	22	1507 E	S28 E34
SAC PEAK	22	1552	N21 E23
SAC PEAK	22	1620	N17 W28
SAC PEAK	22	1625	S13 E08
CLIMAX	22	1643	N23 E20
SAC PEAK	22	1645	N25 E21
CLIMAX	22	1650	S18 E34
SAC PEAK	22	1700	S18 E35
SAC PEAK	22	1830	N18 W65
CLIMAX	22	1849	N24 E35
SAC PEAK	22	1855	N24 E35
CLIMAX	22	1903	S17 E34
SAC PEAK	22	1905	N17 W30
* SAC PEAK	22	1905	S13 W54
SAC PEAK	22	1905	S18 E36
HAWAII	22	1914 E	S17 E37
CLIMAX	22	1959	S17 W06
HAWAII	22	2000	S13 W09
SAC PEAK	22	2000	S15 W08
SAC PEAK	22	2150	N25 E37
SAC PEAK	22	2155	N20 W70
USNRL	23	1325	S27 E12
USNRL	23	1356	S17 E46
* USNRL	23	1402	N29 W02
CAPRI S	23	1422 E	S27 E12
USNRL	23	1423	S28 E12
USNRL	23	1510	S21 E43
USNRL	23	1531	N30 W03
USNRL	23	1822	S29 E10
* CLIMAX	23	1835	N25 E21
USNRL	23	1920	N23 E24
CLIMAX	23	2013	N24 E21
USNRL	23	2016	N24 E21
HUANCAYO	23	2016	N22 E20
SAC PEAK	23	2022	N24 E22
CLIMAX	23	2023	N22 E04
USNRL	23	2024	N22 E05
CLIMAX	23	2115	S26 E17
UCCLE	24	1019	S26 E06
UCCLE	24	1129	S27 E31
WENDEL	24	1212 E	N22 W37
HUANCAYO	24	2020	S19 E28
ATHENS	25	0725	N26 W08
ATHENS	25	0754	N17 W61
UCCLE	25	1019	N28 E07
UCCLE	25	1020	N24 E04
HYDERABAD	25	1030 E	N09 W61
UCCLE	25	1056	S04 W66
UCCLE	25	1124	N15 W34
* WENDEL	25	1152 E	N31 E10
UCCLE	25	1154	N25 W17
WENDEL	25	1251 E	N23 W15
USNRL	25	1252	N22 W17
WENDEL	25	1315 E	N30 W02
* USNRL	25	1322	N27 W10
USNRL	25	1330	S18 E25
USNRL	25	1340	N25 E04
OTTAWA	25	1402	N17 W66
* CAPRI S	25	1406 E	N15 W70
OTTAWA	25	1430	N12 E53
* OTTAWA	25	1435	S04 W68
SAC PEAK	25	1510	S22 E69
USNRL	25	1520 E	S20 E68
SAC PEAK	25	1535	S14 W90
CLIMAX	25	1616 E	N32 E04
SAC PEAK	25	1632	N20 W70
CLIMAX	25	1634	N23 W74
CLIMAX	25	1656	N28 W06
SAC PEAK	25	1657	S28 W10
SAC PEAK	25	1702	S24 W37
SAC PEAK	25	1742	S20 E15
SAC PEAK	25	1812	N23 W00
SAC PEAK	25	1815	S19 E22
SAC PEAK	25	1920	S18 E15
SAC PEAK	25	2027	N25 W22
CLIMAX	25	2057	S18 E21
SAC PEAK	25	2057	S20 E20
SAC PEAK	25	2100	N24 W02
* SAC PEAK	25	2122	S20 E20
ATHENS	26	0701 E	N30 W02
UCCLE	26	0954 E	S25 W35
UCCLE	26	0954 E	N29 W10
UCCLE	26	0954 E	N27 W25
UCCLE	26	1010	N25 W27
UCCLE	26	1010	S07 W90
UCCLE	26	1056	S19 W51
* WENDEL	26	1059 E	S23 W45
UCCLE	26	1104	N28 W12
UCCLE	26	1105	S25 W27
UCCLE	26	1106	S25 W34
UCCLE	26	1110	N28 W12
UCCLE	26	1117	S25 W27
SAC PEAK	26	1811 E	N19 E71
CLIMAX	26	1850	S28 W23
CLIMAX	26	1915	N30 W13
CLIMAX	26	1918	N24 W36
CLIMAX	26	2011	S18 E09
CLIMAX	26	2131	N23 W37
CLIMAX	26	2139	S25 W39
HAWAII	26	2228	S22 N44
WENDEL	27	1020 E	N22 W23
WENDEL	27	1148 E	N25 W20
WENDEL	27	1258 E	N28 W21
USNRL	27	1259	N23 W21
USNRL	27	1307	S07 W90
USNRL	27	1307	S23 W50
USNRL	27	1336	N20 W02
* WENDEL	27	1356 E	N27 W15
OTTAWA	27	1419 E	N24 W16
SAC PEAK	27	1506	S22 W45
USNRL	27	1515	S22 W45
* CLIMAX	27	1635	S25 W42
* SAC PEAK	27	1642	S22 W42
SAC PEAK	27	1835	S21 W42
USNRL	27	1836	S24 W40
SAC PEAK	27	1907	S21 W13
USNRL	27	1910	S20 W15
SAC PEAK	27	2000	N27 W40
SAC PEAK	27	2015	N23 W38
SAC PEAK	27	2017	S26 E32
USNRL	27	2020	N22 W38
USNRL	27	2032	S23 E30
SAC PEAK	27	2122	N25 W42
* HAWAII	27	2136	S10 W15
* SAC PEAK	27	2147	N23 W41
HAWAII	28	0120	S24 E24
* SAC PEAK	28	1550	S23 E21
SAC PEAK	28	1645	S23 E17
SAC PEAK	28	1945	N11 W90
SAC PEAK	28	2125	N23 W43
USNRL	29	1255 E	N21 W50
USNRL	29	1435	S24 E09
USNRL	29	1554	N23 W59
* USNRL	29	1617 E	N23 W59
* SAC PEAK	29	1617 E	N22 W63
SAC PEAK	29	1740	N19 W76
SAC PEAK	29	1747	S07 E85
SAC PEAK	29	1817	S11 W40
SAC PEAK	29	2010	N26 W52
HUANCAYO	29	2011 E	S25 W59
SAC PEAK	29	2110	S26 E06
SAC PEAK	29	2117	N24 W67
WENDEL	30	0930 E	N14 E22
WENDEL	30	0942 E	N27 E00
WENDEL	30	1150 E	S23 W85
WENDEL	30	1250 E	N20 W49
* SAC PEAK	30	1705	S20 W53
USNRL	30	1820	N21 E13
SAC PEAK	30	1835	N18 E57
SAC PEAK	30	2012	S06 E65
* SAC PEAK	30	2015	N18 E55
* CAPRI S	31	1117 E	S23 W18
* CAPRI S	31	1353 E	S19 W67
* CAPRI S	31	1408	S21 W17
SAC PEAK	31	1520	N29 W78
USNRL	31	1524	S23 W21
SAC PEAK	31	1540	N23 W90
USNRL	31	1541	N21 W90
SAC PEAK	31	1547	S18 W57
SAC PEAK	31	1552	S17 W50
CLIMAX	31	2003	S18 E46

* Rated as flare of importance ≥ 1 by other observatories (See CRPL-F Part B).

IONOSPHERIC EFFECTS OF SOLAR FLARES

III

(SHORT-WAVE RADIO FADEOUTS)
DECEMBER 1957

Dec. 1957	Start UT	End UT	Type	Wide Spread Index	Import- tance	Observation Stations	Known Flare, UT CRPL-F 161-B
01	1635	1815	G-SWF	5	1+	BE, CR, HU, <u>MC</u> , PR, WS	1630
02	1101	1136	S-SWF	1	1	<u>NE</u>	1058
03	1312	1342	Slow S-SWF	5	2	DA, HU, NE, PR	1317E
03	1403	1433	Slow S-SWF	4	1	HU, NE, PR	1350
03	1542	1615	Slow S-SWF	5	1+	<u>BE</u> , HU, MC, PR, WS	1546
03	1632	1650	Slow S-SWF	5	1	BE, CR, MC, PR, WS	1631
04	0823	0853	S-SWF	1	2	<u>PU</u>	0840E
04	1238	1251	S-SWF	5	2	DA, HH, HU, NE, <u>PR</u>	1232E
05	1012	1041	Slow S-SWF	2	2	HH, <u>NE</u>	1014E
05	1633	1655	Slow S-SWF	5	2-	BE, HU, <u>MC</u> , PR, WS	1633
06	0348	0414	Slow S-SWF	5	2	AN, CA, OK, <u>TO</u>	0345
06	0933	0953	S-SWF	1	2-	<u>TO</u>	
06	1250	1323	Slow S-SWF	1	1	<u>NE</u>	1250E
06	2347	0010	Slow S-SWF	5	1+	AD, CA, OK	*
12	1215	1234	S-SWF	1	2	<u>HH</u>	1214E
12	1305	1320	S-SWF	3	1-	HU, <u>PR</u>	1309E
12	1802	1830	Slow S-SWF	5	1	BE, HU, <u>MC</u> , PR, WS	1757
13	0156	0245	Slow S-SWF	5	3	AD, AN OK, SY, TO CW	0215E
14	0513	0552	Slow S-SWF	3	1+	OK, CW+	
14	1233	1340	Slow S-SWF	5	3	BE, DA, MA, NE, <u>PR</u> , SW TO, RCA*, CW***	1245E
16	1129	1202	Slow S-SWF	5	1+	HU, NE, PR, <u>PU</u>	1125
16	1158	1226	Slow S-SWF	3	1-	PR, CW**	1143
17	0732	0830	Slow S-SWF	5	2+	HH, OK, NE, CW+, CW***	0734E
17	1532	1612	Slow S-SWF	5	2	BE, CR, <u>HU</u> , MC, PR, WS	1531E
18	0500	0515	G-SWF	4	1+	OK, <u>TO</u> , CW+	0450
18	0620	0650	S-SWF	5	2	OK, <u>NE</u> , CW+	0620E
18	1655	1728	Slow S-SWF	5	2	BE, CR, HU, <u>MC</u> , NE, PR, WS	1653
19	0757	0820	S-SWF	5	3	NE, <u>PU</u> , CW+, CW***	0757E
19	1714	1732	S-SWF	5	1+	BE, CR, MC, PR, WS	1707
20	0545	0611	S-SWF	5	2	<u>OK</u> , NE, TO	0543E
20	0757	0854	S-SWF	1	3	<u>KO</u>	0828E
20	0856	0928	Slow S-SWF	1	1	<u>NE</u>	0850
20	1625	1645	Slow S-SWF	5	1	BE, HU, MC, <u>PR</u> , WS	
21	2235	2340	Slow S-SWF	1	3+	AD	
22	1030	1052	S-SWF	3	3	<u>HH</u> , <u>PU</u>	1025
22	1718	1803	Slow S-SWF	5	2+	BE, CR, HU, MC, <u>PR</u> , WS	1715
22	2238	2330	S-SWF	5	2+	AD, CA, OK, SW, <u>TO</u> WS	2240E
23	0022	0105	Slow S-SWF	5	1+	AD, OK, TO	0028
23	1438	1502	Slow S-SWF	5	2+	BE, HU, MC, NE, <u>PR</u> , WS, RCA*	1436
24	2000	2030	Slow S-SWF	5	1	BE, HU, MC, PR, <u>WS</u>	*
25	0430	0455	S-SWF	5	2+	KO, <u>OK</u>	0435E
25	0632	0659	Slow S-SWF	1	2	KO	0634E
25	1605	1625	Slow S-SWF	4	1+	MC, <u>PR</u> , WS	1605
25	1628	1707	S-SWF	5	3	BE, CR, HU, MC, NE, PR, WS	
25	1815	1902	Slow S-SWF	5	3	BE, CR, HU, MC, NE, <u>PR</u> , WS	1812
25	2238	2256	Slow S-SWF	2	1	AD, AN	*
26	0245	0325	S-SWF	5	2+	AD, CA, OK, TO, CW+	*
26	0920	0942	S-SWF	5	2	HH, NE, <u>PU</u> , CW***	0912
26	1305	1342	Slow S-SWF	5	1+	NE, <u>PR</u>	1300E
26	1810	1837	G-SWF	5	1+	BE, HU, <u>PR</u> , WS	1751
27	0818	0912	Slow S-SWF	1	2	NE	0818
27	0916	1016	Slow S-SWF	1	1	<u>NE</u>	0914E
27	1257	1320	S-SWF	5	2	HH, MA, NE, PR	1303
28	2230	2300	S-SWF	5	2+	AD, CA, HU, OK, SW, <u>WS</u> , RCA+	2229
30	1608	1628	Slow S-SWF	5	1+	BE, <u>CR</u> , MC, PR, WS	1602

* No known flare patrol at this time.

COMMERCE - STANDARDS - BOULDER

CA - Canberra, Australia.
CR - Cornell University, N.Y.
DA - Darmstadt, G.F.R.
HH - Heinrich Hertz Institute, Berlin.
KO - Kodaikanal
NE - Nederhorst den Berg, Netherlands.
PU - Prague, Czech.

TO - Hiraio Radio Wave Observatory.
CW** - Cable and Wireless, Somerton, England.
CW*** - Cable and Wireless, Brentwood, England.
CW+ - Cable and Wireless, Hongkong.
CW++ - Cable and Wireless, Singapore.
RCA* - RCA Communications, Inc., Riverhead, N.Y.

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES
JANUARY 1958

OTTAWA

2800 MC

Jan. 1958	Type*	Start UT Hrs:Mins	Duration Hrs:Mins	Maximum		Remarks
				Time UT Hrs:Mins	Peak Flux	
1	1 Simple 1	15 37	3	15 38	5	
2	2 Simple 2	14 46	1.5	14 46.5	18	
	4 Post Increase		6		5	
2	1 Simple 1	15 21.9	1	15 22.3	5	
2	1 Simple 1	20 15	2	20 15.8	5	
3	1 Simple 1	15 18.5	4	15 20.7	5	
3	2 Simple 2	19 36.5	4.5	19 37.3	12	
4	2 Simple 2	14 56.5	2.5	14 57.2	15	
4	2 Simple 2	19 48.4	1.5	19 49	8	
5	3 Simple 3	14 45	1	14 49.5	20	
5	2 Simple 2	20 13.1	1	20 13.6	8	
6	2 Simple 2	21 23	3	21 24.2	90	In sunset
7	3 Simple 3 A	18 22	1 20	18 40	26	
	6 Complex f	18 29.5	5	18 31.7	28	
	2 Simple 2	18 55	1	18 55.6	17	
8	1 Simple 1	15 10	2.5	15 11	4	
11	3 Simple 3 A	17 26	15	17 30	7	
	2 Simple 2	17 27.8	1.5	17 28.2	53	
11	2 Simple 2 f	19 03.6	8	19 04.9	31	
12	2 Simple 2	14 43	1	14 43.2	9	
12	1 Simple 1	19 31.3	1.5	19 31.8	7	
12	1 Simple 1	20 02.7	1	20 03	7	
13	2 Simple 2	15 07	1	15 07.3	9	
13	3 Simple 3 A	15 44	2 30	16 40	25	
	1 Simple 1	16 13	3	16 14.2	4	
	2 Simple 2 f	16 28.8	9	16 32.2	55	
14	3 Simple 3 A	14 05	1 25	14 37	20	
	1 Simple 1	14 10.5	1.5	14 11	7	
	2 Simple 2	14 38	3.5	14 39.5	27	
14	2 Simple 2	15 42.3	3	15 43	53	
14	2 Simple 2	15 59	6	16 01.8	70	
	4 Post Increase		8		8	
14	3 Simple 3	17 15	3 15	18 35	23	
15	3 Simple 3 A	16 40	4	17 20	40	
	2 Simple 2	16 40	28	16 42.7	1350	
16	2 Simple 2	13 55.9	1	13 56.1	35	
16	3 Simple 3	14 09	1	14 18.5	20	
16	1 Simple 1	15 38.5	5	15 40	7	
16	2 Simple 2	21 13	7	21 14.7	100	In sunset osc.
17	2 Simple 2	17 26	6	17 27.1	30	
19	3 Simple 3	18 25	>3	indet.	13	
20	6 Complex f	14 45.2	22	14 57.8	320	
	4 Post Increase		55		25	
20	2 Simple 2	20 33.7	1	20 34.2	19	
22	3 Simple 3 A	18 09	35	18 18	8	
	2 Simple 2	18 11.2	1.7	18 11.8	9	
23	3 Simple 3	19 49	45	19 59	6	
25	2 Simple 2	16 34	4	16 35.8	10	
25	6 Complex f	17 10	9	17 13.5	98	
28	2 Simple 2	13 43.4	1	13 43.6	24	
29	2 Simple 2	16 37.5	5	16 39	13	
29	3 Simple 3	17 10	24	17 21	6	
30	3 Simple 3	17 51	>3 40	19 15	15	

SOLAR RADIO EMISSION

DAILY DATA
NOVEMBER 1957

BOULDER

167 MC

Nov. 1957	Flux Density $10^{-22} \text{ W m}^{-2} (\text{c/s})^{-1}$						Variability 0 to 3						Observing Periods
	Hours UT					Day	Hours UT					Day	Hours UT
	0 3	12 15	15 18	18 21	21 24		0 3	12 15	15 18	18 21	21 24		
1	-	-	21	15	12	17	-	1	1	1	08	1	13.5-23.8
2	-	-	16	17	14	16	-	1	1	1	08	1	13.5-23.8
3	-	-	19	-	-	18	-	1	3	-	-	2	13.5-19.1
4	-	-	10	14	19	14	-	-	28	28	18	28	14.5-23.7
5	-	-	19	22	18	19	-	0	18	18	18	18	13.6-23.7
6	-	-	-	18	17	18	-	-	-	2	28	2	18.1-23.6
7	-	-	11	12	-	12	-	1	18	2	18	18	13.7-23.6
8	-	-	13	16	-	14	-	0	2	28	18	18	13.7-23.6
9	-	-	14	14	12	13	-	0	2	08	2	2	13.7-23.6
10	-	-	13	16	14	15	-	2	18	2	0	1	13.7-23.6
11	-	-	14	14	12	14	-	3	1	1	1	2	13.8-23.5
12	-	-	15	-	14	15	-	0	18	2	28	28	13.8-23.5
13	-	-	15	14	15	15	-	0	0	0	0	0	13.8-23.5
14	-	-	14	15	-	15	-	18	28	18	08	18	13.8-23.5
15	-	-	15	15	14	14	-	1	0	28	28	28	13.8-23.5
16	-	-	17	17	16	17	-	1	1	2	2	2	13.8-22.8
17	-	-	21	22	21	21	-	2	2	2	0	2	14.3-23.5
18	-	-	23	18	20	21	-	0	1	1	0	1	14.0-17.3, 18.6-23.5
19	-	-	21	17	17	19	-	2	1	0	0	1	13.8-23.4
20	-	-	24	35	19	27	-	0	28	1	1	2	13.9-23.4
21	-	-	23	22	22	23	-	1	18	28	28	18	13.9-23.4
22	-	-	16	13	25	17	-	08	08	08	08	08	13.9-23.4
23	-	-	50	42	43	45	-	2	2	3	2	2	14.0-23.4
24	-	-	92	117	64	94	-	28	28	28	28	28	14.0-23.3
25	-	-	675	304	142	455	-	18	18	28	28	28	14.0-23.3
26	-	-	75	82	141	93	-	28	18	18	28	28	14.0-23.3
27	-	-	79	60	42	66	-	18	28	28	28	28	14.0-16.4, 17.0-23.3
28	-	-	32	29	28	30	-	18	28	28	28	28	14.1-23.3
29	-	-	168	-	-	331	-	28	28	28	28	28	14.1-23.3
30	-	-	99	98	44	88	-	2	2	2	2	2	14.1-23.3
31													

COMMERCE - STANDARDS - BOULDER

ERRATA - In the October 1957 CRPL-F 158 Part B publication, Tables of IVg and IVh of Solar Radio Emission Daily Data, Boulder, September 1957 are incorrectly identified. Table IVg should have been labeled 450 Mc/s instead of 167 Mc/s and Table IVh should have been labeled 167 Mc/s instead of 450 Mc/s.

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

NOVEMBER 1957

BOULDER

167 MC

Nov. 1957	Type Ap.J	Start UT	Time of Maximum	Duration Minutes	Type IAU	Max. Flux Density $10^{-22} \text{ W m}^{-2} (\text{c/s})^{-1}$		Remarks
						Inst.	Smooth	
1	1	1330 B	1659.3	210 D	MF	340	-	N2
1	3	1920.3	1920.3	0.2	ESD	780	-	
2	1	1500	1554.1	525 D	MF	170	-	
3	1	1330 B	1429.3	337 D	MF	670	-	
3	8	1651	1652.1	6.0	ECD	2500 D	410	
4	1	1845	2055.0	295 D	MF	7000 D	-	N3
5	1	1947	2329.0	233 D	M	420	-	
6	1	1805 B	2211.7	330 D	M	1400	-	
6	2	2017.3	2017.8	1.3	ECD	9300 D	-	N4
7	3	1419.5	1419.6	0.4	ESD	360	-	
7	3	2043.6	2043.8	0.9	ECD	270	-	
8	4	1745	1745.2	250	ECD	190	-	N5
8	3	1858.2	1858.3	0.3	ECD	560	-	
9	1	1541	2122.2	344	M	1200 D	-	
9	3	1642.7	1643.2	5.4	ECD	160	45	
10	2	1454.3	1456.7	1.9	ECD	1400 D	400	S;Burst 1820.4
11	8	1416	1419 X	08	ECD	2900 D	1200 D	S;Burst 1603.1
12	1	1530	2103 X	480 D	M	1800 D	-	S;N6
14	1	1345 B	1531.5	585 D	MF	490	-	
15	1	1423	2015.2	547 D	MF	2800 D	-	S
15	3	2012.2	2012.4	0.3	ESD	2700 D	-	
15	3	2237.2	2237.3	0.2	ESD	1900 D	-	
16	1	1350 B	2108.1	534 D	MF	1300 D	-	Bursts 1631.2, 2221.9
16	8	1811.3	1814.1	3.0	CD	2300 D	290	
17	1	1418 B	1636.4	399	MF	1900	-	N7
17	8	1421	1424 I	10 X	ECD	2300	1000	I.Cal.Period
17	2	2046.8	2047.0	8	ECD	3100 D	-	
18	3	1632.4	1632.4	0.3	ESD	1600	-	Burst 2057.1
19	3	1357.9	1358.1	0.7	ESD	1600 X	-	
19	3	1421.6	1421.9	0.8	ESD	1800	-	
20	3	1730.2	1730.3	0.1	ESD	220	-	
20	9	1734	1750.0	81	CD	350	29	Burst 2114
21	3	1415.7	1415.9	0.7	ESD	220	-	N8
21	3	2029.3	2029.6	0.4	ESD	2400	-	
23	6	1400 B	2057.4	565 D	CA	2200	38	N9
23	2	2237.1	2237.1	0.8	CD	2000	-	
24	6	1400 B	1812.2	560 D	CA	1500	130	N10
25	6	1400 B	1858.8	560 D	CA	3000 D	750	N11
26	6	1400 B	2252.2	560 D	CA	2800	110	N12
27	6	1400 B	1708.4	560 D	CA	1800	73	I 1626-1700;N13
27	3	1842.7	1843.1	1.0	ECD	2700	-	
27	3	1947.5	1947.9	1.0	ECD	3500 D	-	
28	3	1505.7	1506.1	0.7	ESD	640	-	
28	6	1510	1705.1	490 D	CA	720	21	Large burst 2318.7
29	1	1405 B	1440.8	145 D	MF	680	-	Large burst 1446.8
29	6	1630	2112.2	410 D	CA	4400 D	610	Large bursts 2129.0, 2201.3
30	6	1405 B	1811.8	555 D	CA	3500 D	100	N14

COMMERCE - STANDARDS - BOULDER

- Interference may occasionally obscure or be mistaken for solar events. Relatively small events not reported.
- November 1, bursts 1458.2, 1623.4, 1659.4.
- November 4, large bursts 1454.1, 2022.3.
- November 6, large bursts 2114.1, other bursts 2035.0, 2050.1.
- November 8, large bursts 1959.3, 2002.5, 2154.7.
- November 12, large bursts 2050.9, 2110.2, 2114.3, 2317.0.
- November 17, large bursts 1530.3, 1630.4, 1737.9, 2035.3.
- November 21, large burst, also S at approximately 2201.
- November 23, large bursts 1412.3, 1435.9, 1615.8, 1704.2, 1934.3, 2048.3, 2103.7.
- November 24, large bursts, 1406.9, 1408.5, 1453.3, 2207.9.
- November 25, large bursts 1711.4, 2115.1, other bursts 2111.1, 2231.2, 2233.1.
- November 26, other bursts, 1410.3, 1733.6, 2154.2.
- November 27, large bursts 1507.7, 1705.0, 1707.8, 2318.4, other bursts 2034.6, 2312.1.
- November 30, large bursts 1409.0, 1548.1, 2306.0, other bursts 1637.9, 1644.1, 1937.1.

SOLAR RADIO EMISSION

DAILY DATA
DECEMBER 1957

BOULDER

167 MC

Dec. 1957	Flux Density $10^{-22} \text{ W m}^{-2} (\text{c/s})^{-1}$						Variability 0 to 3						Observing Periods	
	Hours UT					Day	Hours UT					Day	Hours UT	
	0 3	12 15	15 18	18 21	21 24		0 3	12 15	15 18	18 21	21 24			
1	-	-	168	131	89	134	-	-	1	1	1	1	14.5-23.3	
2	-	-	49	-	74	61	-	-	2	2	2	2	14.1-23.3	
3	-	-	28	30	26	28	-	-	2	1	1S	1S	14.2-23.3	
4	-	-	33	26	27	29	-	-	0S	0S	1S	0S	14.6-23.3	
5	-	-	36	26	23	29	-	-	2	2	1S	2	14.2-23.3	
6	-	-	-	25	22	24	-	-	2S	2S	1S	2S	14.2-23.3	
7	-	-	30	51	-	39	-	-	2	2	2	2	14.3-23.3	
8	-	-	26	25	23	25	-	-	1	1S	1S	1S	14.3-23.3	
9	-	-	28	26	27	27	-	-	1S	2S	1S	1S	14.3-23.3	
10	-	-	25	25	17	23	-	-	0S	1S	1S	1S	14.3-23.3	
11	-	-	25	26	-	25	-	-	1S	0S	0S	0S	14.3-21.4, 21.9-23.3	
12	-	-	29	29	-	29	-	-	1S	1S	1S	1S	14.3-23.3	
13	-	-	-	26	-	25	-	-	1S	1S	0S	1S	14.3-20.9, 22.2-23.3	
14	-	-	24	24	20	23	-	-	1	1	2S	1	14.3-23.3	
15	-	-	33	30	23	30	-	-	3	3	2	3	14.3-23.3	
16	-	-	26	30	31	29	-	-	2	2	2S	2	14.3-23.3	
17	-	-	107	223	123	155	-	-	3S	3	2	3	14.3-23.3	
18	-	-	346	451	476	418	-	-	1S	2	2S	2S	14.3-23.3	
19	-	-	523	443	852	575	-	-	1	2	2S	2	14.3-23.3	
20	-	-	673	507	457	557	-	-	2S	2S	1S	2S	14.3-23.3	
21	-	-	216	256	278	246	-	-	2	2	1S	2	14.3-23.3	
22	-	-	552	682	613	616	-	-	1	1	1	1	14.3-23.3	
23	-	-	251	230	163	221	-	-	2	2S	2S	2S	14.4-23.3	
24	-	-	42	36	35	38	-	-	2	2S	2	2	14.4-23.4	
25	-	-	41	42	33	39	-	-	3	3	3	3	14.4-23.4	
26	-	-	44	136	339	152	-	-	2	3	3	3	14.4-23.4	
27	-	-	-	50	44	48	-	-	-	2S	2S	2S	17.0-23.4	
28	-	-	107	-	261	184	-	-	2	-	2S	2S	15.1-17.3, 20.8-23.4	
29	-	-	279	-	-	-	-	-	0	-	-	-	14.4-17.3	
30	-	-	-	-	-	-	-	-	-	-	-	-	-	
31	-	-	-	40	35	38	-	-	-	1	2	1	18.0-23.5	

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES
DECEMBER 1957

BOULDER

167 MC

Dec. 1957	Type Ap.J	Start UT	Time of Maximum	Duration Minutes	Type IAU	Max. Flux Density $10^{-22} \text{ W m}^{-2} (\text{c/s})^{-1}$		Remarks
						Inst.	Smooth	
1	6	1428 B	2151.6	532 D	CA	1000	140	N2
2	6	1405 B	2023.7	555 D	CA	1400	57	N3
3	1	1410 B	1735.7	550 D	MF	250	-	
4	1	1436 B	2156.1	524 D	M	150	-	S
5	6	1410 B	1645.5	320 D	CA	570	19	
5	3	1417.2	1417.3	0.2	ECD	1500X	-	
5	1	1930	1955.5	225 D	MF	500	-	Burst 2031.7
6	1	1410 B	1425.2	545 D	MF	1600X	-	S;N4
7	1	1415 B	1438.7	222 D	M	250	-	Burst 1712.3
7	6	1757	1809.9	318 D	CA	190	35	S
7	3	1430.3	1430.7	1.2	ECD	1400	-	
7	3	1522.2	1522.3	0.8	ECD	1500	-	
7	3	2229.3	2229.8	2.7	ECD	1200	-	S
8	1	1415 B	1500.0	540 D	M	380	-	N5
9	1	1415 B	1415.4	540 D	M	600X	-	S;N6
10	3	1811.3	1812.0	1.0	ECD	460	-	S;Bursts 2041.1,2135.2
12	1	1415 B	2123.9	540 D	MF	510	-	S;N7
13	1	1420 B	1432.6	535 D	MF	190	-	S;I 2055-2210
13	3	1919.6	1919.7	1.0	ECD	350	-	
14	1	1420 B	2310.1	535 D	MF	370	-	S;Bursts 1831.6,2009.9
14	3	2312.4	2312.4	11	ECD	2000X	-	
15	6	1420 B	1620.4	535 D	CD	1200	16	N8
15	3	1820.9	1821.3	0.9	CD	2200	-	
16	1	1420 B	1741.8	280 D	MF	840	-	
16	6	1900	2140.7	260 D	CA	870	8	Large Burst 1939.8
17	6	1420 B	1620.9	540 D	CA	3500D	200	N9
17	3	1806.1	1806.1	1.0	CD	2100	-	
17	3	1918.0	1918.2	0.6	ESD	2700	-	
18	6	1420 B	1949.1	367 D	CA	3300D	500	N10
18	3	1512.0	1512.0	0.3	ESD	2100	-	
18	9	2027	2046.7	173 D	CD	1700	600	
18	3	2203.3	2203.6	0.6	CD	3600D	-	
19	6	1420 B	2056.8	540 D	CD	2800D	680	N11
20	6	1420 B	1713.1	540 D	CD	3000D	650	S;N12
21	6	1420 B	1831.3	540 D	CD	3100D	250	Large Burst 1553.9

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

BOULDER

DECEMBER 1957

167 MC

Dec. 1957	Type Ap.J	Start UT	Time of Maximum	Duration Minutes	Type IAU	Max. Flux Density $10^{-22} \text{ w m}^{-2} (\text{c/s})^{-1}$		Remarks
						Inst.	Smooth	
21	3	1431.5	1432.1	1.4	CD	2700D	-	
21	3	1808.1	1808.7	0.7	ECD	2800D	-	
21	3	1834.1	1834.2	0.2	ESD	3100D	-	
22	6	1420 B	1817.2	540 D	CA	2500D	670	N13
23	6	1425 B	2116.4	535 D	CA	3000D	230	N14
23	2	1621.4	1621.9	1.6	CD	3300D	1000	
24	6	1425 B	2024.8	540 D	CA	560	19	N15
25	6	1425 B	1655.2	540 D	CA	1200	19	N16
25	8	1634.4	1634.8	5.0	ECD	3400D	1300	
25	3	1700.4	1701.0	0.8	ECD	3400D	-	
25	9A	1815.2	1816.2	1.9	ECD	3100D	1400	
25	9B	1821.8	1823.0	2.7	ECD	3000D	550	
25	8	2029 X	2031.6	6.0 X	CD	3400D	1300	
25	8	2058	2058.8	2.0	ECD	3600D	1900	
25	3	2123	2125	3.0 X	ECD	3600D	-	
26	6	1425 B	2101.1	540 D	CD	3400D	220	N17
26	2	1835	1835.4	3.0	CD	3000D	1200	
26	2	1910	1911.9	3.0	CD	3500D	1300	
26	3	1914.3	1915.0	0.7	ECD	3500D	-	
27	6	1700 B	2139.9	385 D	CA	670	6	Bursts 2137.0, 2150.0
28	6	1505 B	1702.3	500 D	CD	1400	160	S;I 1715-2050;N18
29	6	1425 B	1431.9	170 D	CD	440X	6	
31	6	1800 B	2142.2	330 D	MF	750	9	Bursts 2017.2, 2213.1

COMMERCE - STANDARDS - BOULDER

1. Interference may obscure or be mistaken for solar events. Relatively small events are not reported.
2. December 1, large bursts 2250.2, 2307.8.
3. December 2, large bursts 1416.6, 1422.2, 1613.1, 1809.1, other bursts 1414.1, 1545.8, 1635.4, 2117.5, 2244.7.
4. December 6, large bursts 1421.1, 1423.7, 1455.6.
5. December 8, bursts 1451.5, 1504.1, 1639.2.
6. December 9, bursts 1840.4, 1845.8, 2003.0.
7. December 12, large burst 1419.8, bursts 1615.9, 1757.4, 1802.5.
8. December 15, large bursts 1456.4, 2038.1, bursts 1422.5, 1509.4, 1519.2, 1650.1, 1941.1.
9. December 17, large bursts 1713.1, 1809.9, 1810.4, 2022.1, 2030.5, bursts 1554.5, 1652.4, 2145.2, 2231.2.
10. December 18, large bursts 2137.0, 2152.8, 2153.2, 2210.7, bursts 1905.4, 1920.7.
11. December 19, large bursts 1430.2, 1847.8, 1911.3, 2240.9, bursts 1520.7, 1639.3, 1710.0.
12. December 20, large bursts 1454.5, 1552.3, 1603.3, 1750.2, 1811.2, 2141.1, 2151.8.
13. December 22, large bursts 1434.0, 2035.9, 2237.0.
14. December 23, large burst 1441.5, bursts 1809.8, 1847.1, 2041.9, 2110.3.
15. December 24, large bursts 1432.2, 1710.0, 1719.9, burst 1839.9.
16. December 25, large burst 2142.5, bursts 1949.9, 2150.9.
17. December 26, large bursts 1609.8, 1841.3, 1910.0, 2252.9, bursts 1607.5, 1821.9.
18. December 28, large bursts 2111.8, 2157.1, 2208.5.

SOLAR RADIO EMISSION

DAILY DATA
DECEMBER 1957

BOULDER

470 MC

Dec. 1957	Flux Density $10^{-22} \text{ W m}^{-2} (\text{c/s})^{-1}$						Variability 0 to 3						Observing Periods
	Hours UT					Day	Hours UT					Day	Hours UT
	0 3	12 15	15 18	18 21	21 24		0 3	12 15	15 18	18 21	21 24		
1	-	-	84	81	82	82	-	-	0S	0S	1S	0S	14.4-23.3
2	-	-	-	-	-	-	-	-	0S	-	-	-	14.2-17.0
3	-	-	-	112	123	117	-	-	-	1S	1S	1S	18.7-23.3
4	-	-	116	116	120	117	-	-	1	0	0S	0S	14.2-23.3
5	-	-	114	120	117	117	-	-	1	0	0S	0S	14.3-23.3
6	-	-	119	120	119	119	-	-	0	0	1S	0	14.3-23.3
7	-	-	110	114	111	112	-	-	0	0	0	0	14.3-22.5
8	-	-	111	117	115	114	-	-	1	0	1S	1	14.3-23.3
9	-	-	106	107	109	107	-	-	0	0	0	0	14.3-23.3
10	-	-	103	106	106	105	-	-	1	0	0S	0	14.3-23.3
11	-	-	107	110	113	110	-	-	0	0	0S	0	14.7-23.3
12	-	-	102	110	110	107	-	-	0	0	0S	0	14.3-23.3
13	-	-	103	105	59	93	-	-	0	0	0S	0	14.3-20.0, 20.5-23.3
14	-	-	54	58	57	56	-	-	0	0	1	0	14.3-23.3
15	-	-	57	58	-	57	-	-	0	0	0	0	14.3-21.0, 21.8-23.3
16	-	-	56	59	62	58	-	-	0	0	0S	0	14.3-23.3
17	-	-	59	61	64	61	-	-	0S	1	0S	0S	14.3-23.3
18	-	-	62	62	65	63	-	-	0S	0S	1S	0S	14.3-19.5, 20.3-23.3
19	-	-	62	61	68	63	-	-	0	0S	0S	0S	14.3-23.3
20	-	-	93	87	91	90	-	-	1	0S	0S	0S	14.4-23.3
21	-	-	93	102	112	101	-	-	1	0S	1	1	14.4-23.3
22	-	-	109	104	126	111	-	-	3	2	3	3	14.4-23.3
23	-	-	78	75	77	76	-	-	1S	1	1S	1S	14.4-23.3
24	-	-	66	74	75	71	-	-	0	0	1	0	14.4-23.3
25	-	-	68	70	67	68	-	-	2	1	1	1	14.4-18.4, 19.5-23.4
26	-	-	67	71	73	70	-	-	1	1	1S	1	14.4-23.4
27	-	-	69	71	71	70	-	-	0	1S	1S	1S	14.4-23.4
28	-	-	65	67	68	66	-	-	0	0	2	0	14.4-23.4
29	-	-	66	66	69	66	-	-	0	0	1	0	14.4-23.4
30	-	-	63	65	71	66	-	-	0	1S	0S	0S	14.5-23.4
31	-	-	63	64	65	64	-	-	0S	0	0S	0S	14.5-23.4

ERRATA - In the October 1957 CRPL-F 158 Part B publication, Tables of IVg and IVh of Solar Radio Emission Daily Data, Boulder, September 1957 are incorrectly identified. Table IVg should have been labeled 450 Mc/s instead of 167 Mc/s and Table IVh should have been labeled 167 Mc/s instead of 450 Mc/s.

COMMERCE - STANDARDS - BOULDER

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES
DECEMBER 1957

BOULDER

470 MC

Dec. 1957	Type Ap.J	Start UT	Time of Maximum	Duration Minutes	Type IAU	Max. Flux Density $10^{-22} \text{ W m}^{-2} (\text{c/s})^{-1}$		Remarks
						Inst.	Smooth	
1	1	1426 B	2044.0	534 D	M	210	-	S
1	0	1634	1636.7	16.0	SD	270	31	S
3	6	1839	1954.2	281 D	CA	250	78	S
3	3	2111.3	2111.3	1.2	ECD	1200	-	S
4	1	1410 B	1732.3	550 D	MF	210	-	
4	2	1706.6	1708.1	3.0	ECD	290	61	
5	3	1557.3	1557.3	0.3	ESD	420	-	
7	1	1415 B	1819.3	495 D	M	200	-	
8	2	1452	1504.4	14	ECD	1000	-	
8	2	2142.0	2142.4	2.5	ECD	850	290	S
10	1	1415 B	1704.5	540 D	M	250	-	
14	1	1900	2251.2	255 D	MF	200	-	
17	1	1420 B	1933.2	540 D	MF	240	-	S
18	1	1415 B	2119.6	545 D	M	220	-	S, N2, I 1931-2016
20	6	1425 B	1810.3	535 D	CA	150	53	
21	6	1425 B	1720.9	535 D	CA	800	53	Bursts 1458.9, 2205.8
22	6	1425 B	2048.3	535 D	CA	510	64	N3
22	8	1602	1612.0	12	ECD	1200	490	S
22	8	1622	1624.2	9 D	ECD	2000D	550	I
22	9A	1716	1720.4	32	ECD	3700D	1100	
22	9B	1748	1752.6	10	ECD	2400D	900	
22	8	2112	2122.0	14 D	CD	1100	290	
22	9A	2234.3	2236.3	4.6	ECD	4700D	3500D	
22	9B	2238.9	2241.8	11	CD	3900D	1000D	
22	9	2249.9	2357.3	15.6	CD	2300D	700	
22	3	2311.2	2312.1	1.6	ECD	2200D	-	
23	9	1438 X	1447.2	21 X	CD	3400D	1900D	N4
23	1	1500	1622.4	500 D	M	240	-	
24	3	2004.4	2004.9	0.6	ECD	360	-	
25	1	1425 B	2103.8	540 D	M	360	-	I 1826-1930
25	8	1633	1635.3	6.0	ECD	1900D	190	N5
26	1	1517	2124.8	488 D	M	330	-	S
26	3	1605.7X	1606.1	0.8X	ECD	950	-	Bursts 1908.8, 1912.0
27	3	2037.4	2039.2	2.4	ECD	860	200	S, Bursts 2135.2
28	9	2229 I	2229.9	15	ECD	3600D	270	I

COMMERCE - STANDARDS - BOULDER

1. Interference may occasionally obscure or be mistaken for solar events.
2. December 18, bursts 2201.9.
3. December 22, large bursts 2013.1, bursts 1543.5, 2217.1.
4. December 23, bursts 1519.1, 1601.8, 1847.1.
5. December 25, large bursts 1629.2, bursts 1547.1, 2150.1, 2303.4.

GEOMAGNETIC ACTIVITY INDICES

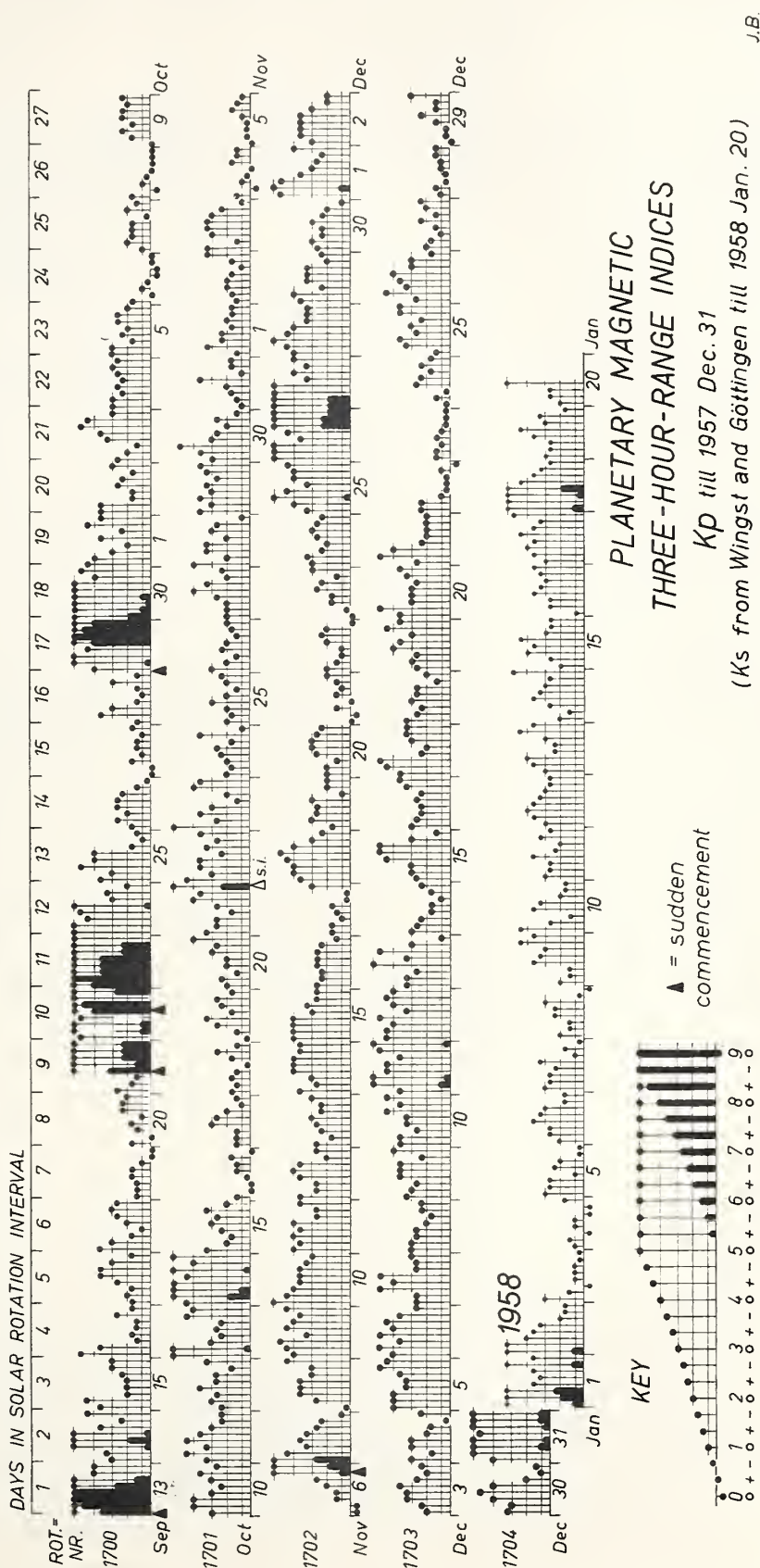
DECEMBER 1957

Dec. 1957	C	Values Kp								Sum	Ap	Final Selected Days	
		Three hour Gr. interval											
		1	2	3	4	5	6	7	8				
1	1.2	5-	6-	5-	4-	3o	3-	2+	4o	31-	29	Five Quiet	
2	0.9	3o	4-	4-	4-	4-	3o	2o	2o	25-	16		
3	0.8	2o	2+	3+	3+	4-	3-	2o	2+	22-	13		
4	0.5	3o	2-	3o	3o	2o	2-	1-	2+	17+	10		22
5	1.1	4o	4o	4o	3+	3+	4-	5-	4+	31+	26		23
												27	
6	1.1	4o	5-	4-	5-	4o	4+	4-	3-	32-	28	28	
7	1.1	3-	3-	5-	4o	5-	3-	3-	3o	27o	21	29	
8	0.5	3o	3o	3-	3-	2o	2-	2+	2+	20-	11		
9	1.0	3+	3o	3-	4-	4-	4-	2+	4o	27-	18		
10	1.1	4-	4-	3-	3+	3+	4+	4-	4+	29o	22		
11	1.4	4-	6-	5+	4+	4+	4-	5-	5+	37o	41	Five Disturbed	
12	1.1	4+	4+	4o	5-	3+	4o	4+	4o	33o	29		
13	1.0	3+	3+	3-	5o	3+	5-	3o	1o	26+	22		
14	0.3	3o	3-	2+	2-	2-	1o	2-	2+	16+	8		1
15	1.1	3-	3o	3o	4+	5-	5-	3o	1+	27-	22		6
												11	
16	0.8	3o	3-	2+	2+	3-	2+	3+	4-	22+	13	12	
17	1.0	4-	4+	5-	2+	2o	3o	3+	3+	27-	20	31	
18	0.5	3+	3-	2+	3o	3-	3-	1+	2o	20o	11		
19	1.1	3-	3o	3-	4o	4-	3o	4+	4-	27o	20		
20	1.1	4-	5-	3o	3o	3o	3-	3+	4-	27o	20		
21	0.7	3-	5-	4o	2+	2o	2o	2o	2o	22-	14	Ten Quiet	
22	0.1	2+	2+	1o	1-	1-	1-	1o	0o	9-	4		
23	0.1	1+	1+	1o	1+	1o	1-	1-	1-	8o	4		
24	0.4	1-	1+	1-	3-	2+	2-	2+	2-	13+	7		4
25	1.0	1+	3+	4-	3-	3o	2+	4-	4-	24-	16		8
												14	
26	1.0	3-	4+	3+	4-	4o	3o	3o	2-	26-	18	18	
27	0.4	2o	2-	1o	1+	2+	1+	2o	2+	14o	6	22	
28	0.1	1o	1+	1-	1-	1o	1o	1+	1+	8+	4	23	
29	0.4	0+	1-	1-	1+	2+	1+	1+	3o	11o	6	24	
30	1.0	3+	3o	4o	5-	4o	2o	1o	1+	23+	18	27	
31	1.6	4o	5o	6-	5+	5-	5+	6-	6-	41+	53	28	
												29	
Mean:	0.82									Mean:	18		

Errata:

COMMERCE - STANDARDS - BOULDER

In CRPL-F 157 Part B, Geomagnetic Activity Indices, July 1957 under the Five Disturbed Days the date 10 should be omitted. The five disturbed days for July 1957 were 1, 2, 3, 5 and 19.



CRPL RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

NORTH ATLANTIC

DECEMBER 1957

Dec. 1957	North Atlantic 6-hourly quality figures				Short-term forecasts issued about one hour in advance of:				Whole day index	Advance forecasts (J-reports) for whole day; issued in advance by:			Geomag- netic K _{Fr}	
	00 to 06	06 to 12	12 to 18	18 to 24	00	06	12	18		1-4 days	4-7 days	8-25 days	Half Day (1) (2)	
1	7-	7-	7o	7o	7	6	7	7	7-	7	6		(4)	3
2	7o	7o	7o	7o	7	7	7	7	7o	7	6		3	3
3	7o	6+	7-	7-	7	7	7	7	7-	7	7		3	2
4	6+	7-	7-	7-	6	6	7	7	7-	7	7		2	2
5	6+	6o	7-	6o	7	6	7	7	6+	7	7		3	3
6	6o	6+	7o	7-	6	6	7	7	6+	6	7		(4)	3
7	6+	7-	7o	7o	6	7	7	7	7-	7	7		3	3
8	7-	7-	7-	7o	6	7	7	7	7-	7	7		3	2
9	6+	7-	7o	7o	7	7	7	7	7-	7	7		2	3
10	7o	7-	6o	6-	6	7	7	6	6+	7	7		3	3
11	6o	6-	7o	6+	6	6	6	7	6+	7	7		(4)	(4)
12	6+	7-	7+	6o	6	6	7	7	6+	7	7		(4)	3
13	6o	6+	7-	7-	6	6	6	7	6+	7	7		(4)	3
14	7-	7-	7o	7-	6	7	7	7	7-	7	7		2	2
15	6+	6+	7+	7-	6	6	7	7	7-	7	7		3	3
16	6o	7-	7+	6+	7	7	7	7	7-	7	7		2	3
17	6-	7-	7o	7-	6	6	7	7	7-	7	7		3	3
18	6+	7-	7o	7-	6	7	7	7	7-	7	7		3	2
19	7-	7-	7-	6o	6	7	6	5	7-	6	7		3	3
20	6o	6+	7o	6+	5	6	7	6	6+	4	5		3	3
21	6+	6o	7-	7-	6	7	7	6	6+	5	5		3	2
22	6+	7o	7o	7o	7	7	7	7	7-	5	6		1	0
23	7o	7-	7o	7o	7	7	7	7	7o	6	7		1	1
24	6+	6+	7+	7o	7	7	7	7	7-	7	7		1	2
25	7o	7-	7o	7-	7	7	7	7	7-	7	7		2	3
26	6+	6o	6+	7-	6	6	7	6	6+	6	7		3	3
27	7o	7o	7o	7o	6	7	7	7	7o	5	6		1	2
28	7o	7-	7o	7o	7	7	7	7	7o	5	6		1	1
29	7o	7o	7+	7o	7	7	7	7	7o	5	6		1	2
30	7-	7-	7o	7o	7	7	7	7	7-	6	6		3	3
31	7-	6-	6+	5o	7	6	6	6	6-	7	6		(4)	(4)
Score: Quiet Periods					P	20	24	26	23		16	15		
					S	11	7	5	8		10	16		
					U	0	0	0	0		4	0		
					F	0	0	0	0		1	0		
Disturbed Periods					P	0	0	0	0		0	0		
					S	0	0	0	0		0	0		
					U	0	0	0	0		0	0		
					F	0	0	0	0		0	0		

() represent disturbed values.

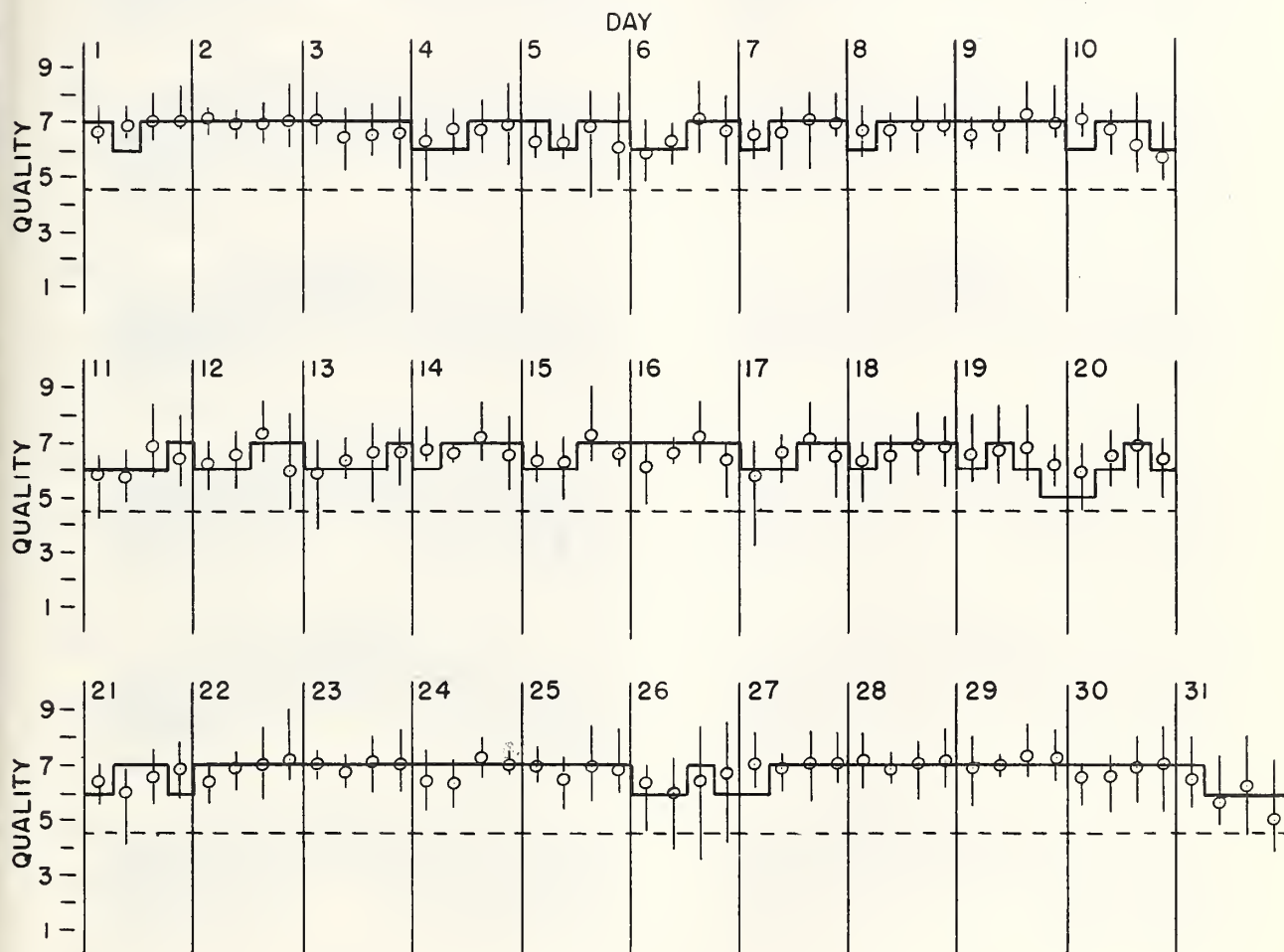
CRPL RADIO PROPAGATION QUALITY FIGURES AND FORECASTS NORTH ATLANTIC

DECEMBER 1957

— Short-term forecast

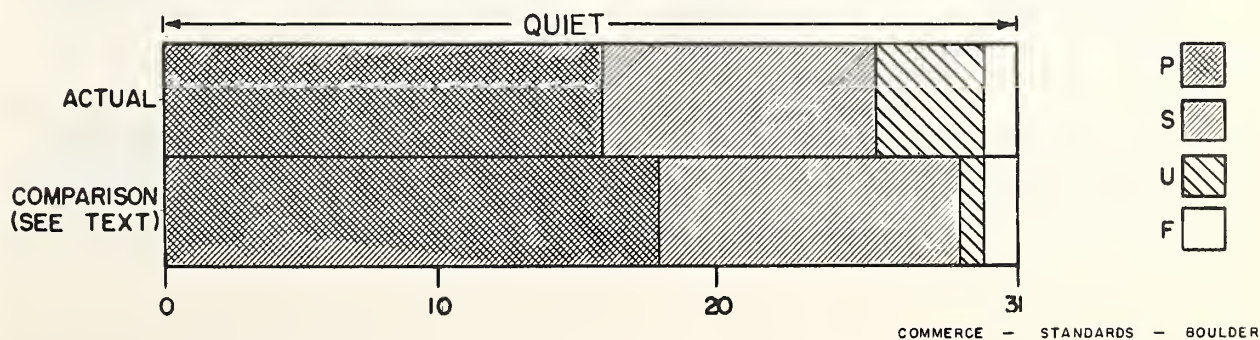
| Range of reports

o Quality figure



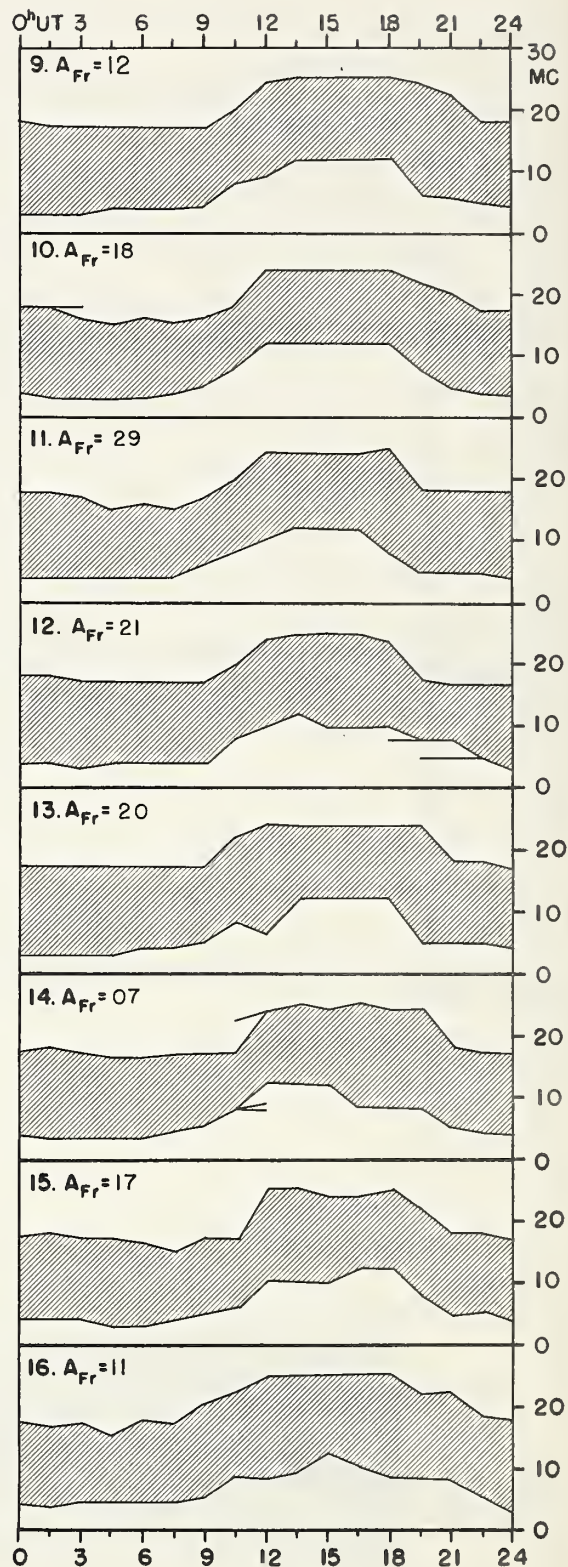
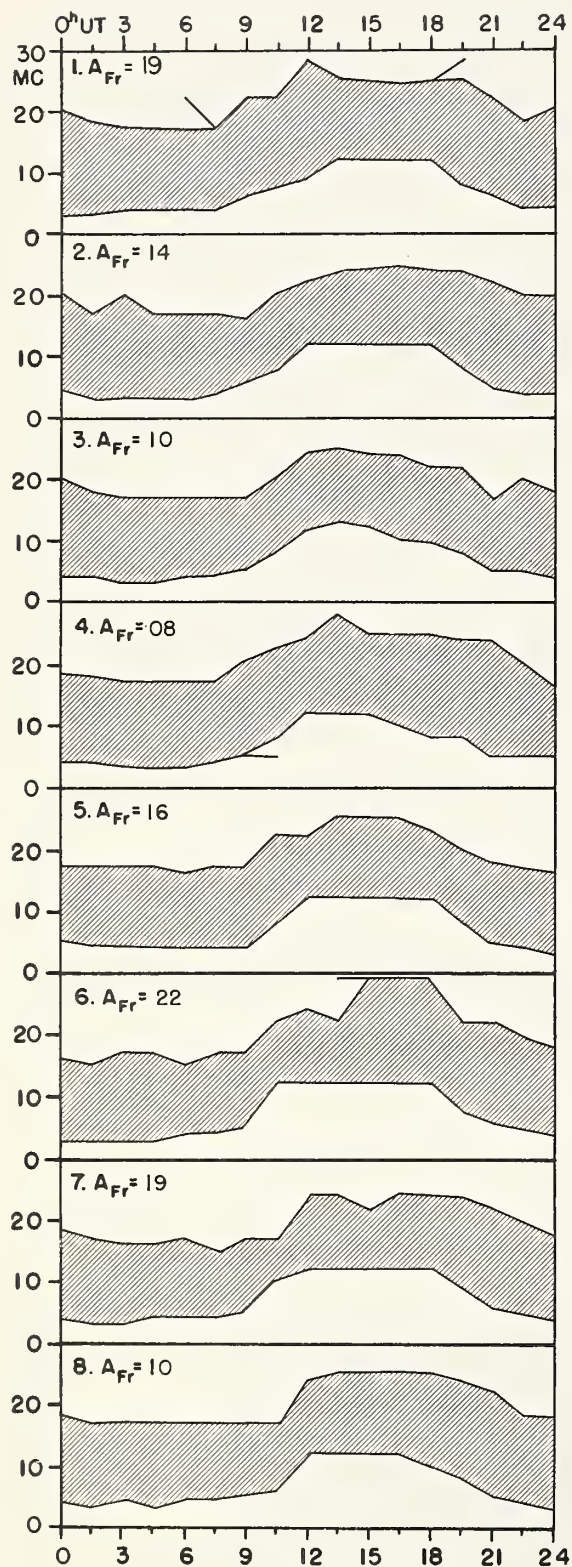
OUTCOME OF ADVANCED FORECASTS

1 TO 4 DAYS AHEAD

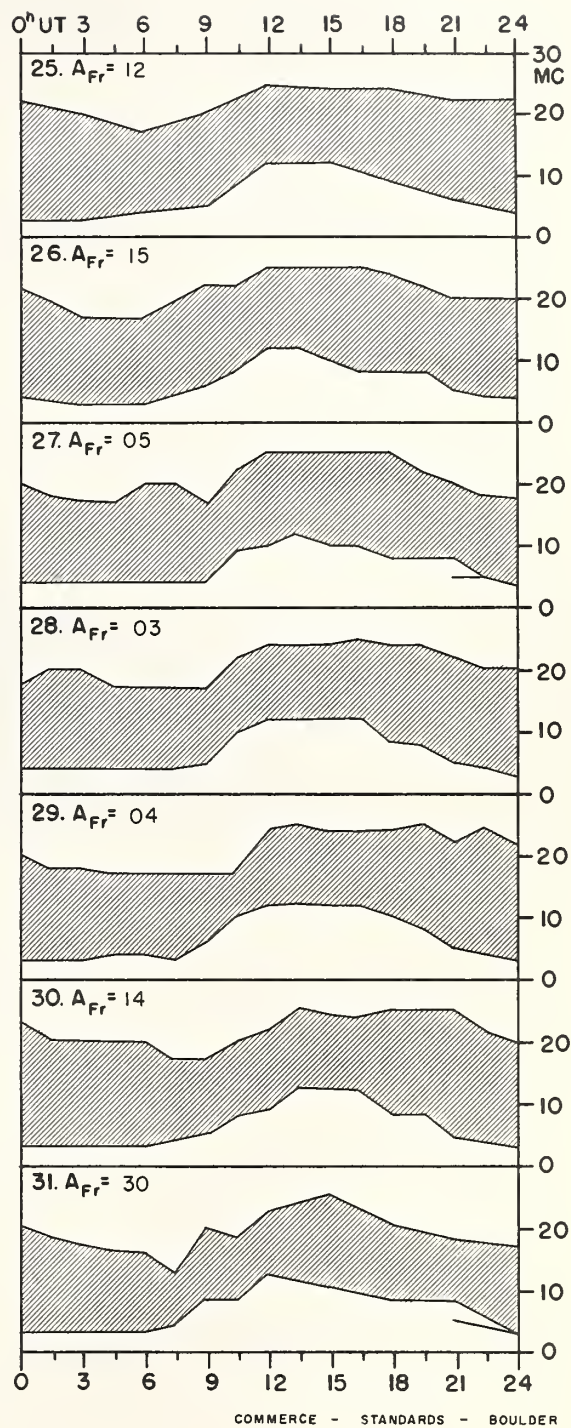
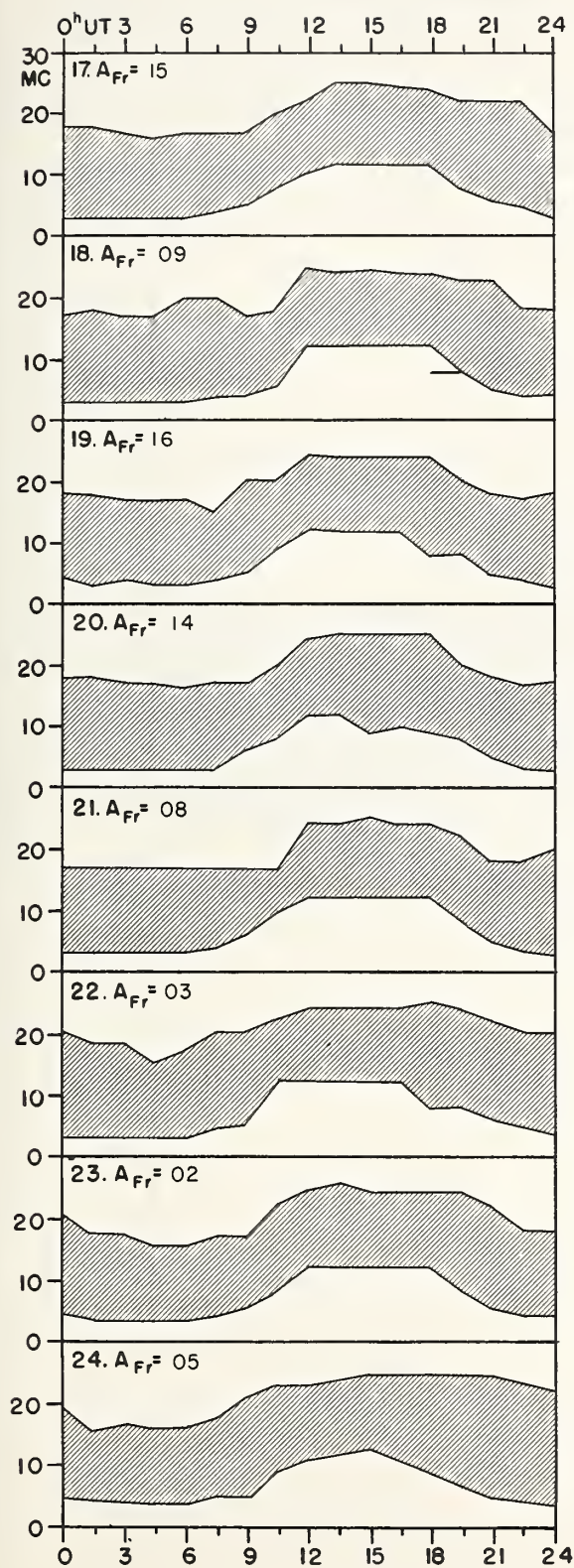


USEFUL FREQUENCY RANGES -- NORTH ATLANTIC PATH

DECEMBER 1957



DECEMBER 1957



Adapted from Observations by Deutsches Bundespost

CRPL RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

NORTH PACIFIC

DECEMBER 1957

Dec. 1957	North Pacific 8-hourly quality figures			Short-term fore- casts issued at			Whole day index	Advance forecasts (Jp reports) for whole day; issued in advance by:			Geomag- netic K _{SI}	
	03 to 11	11 to 19	19 to 03	02	10	18		1-4 days	4-7 days	8-25 days	Half Day (1)	Day (2)
1	6	5	5	7	6	6	6	6	6		(4)	3
2	5	6	7	6	6	6	6	6	6		(4)	(4)
3	7	6	7	6	6	6	7	7	6		2	2
4	6	6	7	6	6	6	6	6	7		2	2
5	6	6	6	6	6	5	6	5	7		(4)	(4)
6	6	6	7	6	6	5	6	5	7		(4)	(4)
7	6	5	6	6	6	6	6	6	6		3	(4)
8	6	6	6	6	6	6	6	6	6		2	2
9	6	6	7	6	6	6	6	6	6		3	3
10	5	5	6	6	6	6	6	6	6		3	(4)
11	5	6	6	6	5	6	6	6	6		(4)	(4)
12	5	5	6	6	6	6	5	6	6		(4)	(4)
13	6	7	7	6	6	6	7	6	6		3	3
14	6	6	6	6	6	7	6	6	6		2	2
15	5	6	6	6	5	6	6	6	6		2	(4)
16	7	6	6	6	6	6	6	6	6		2	2
17	7	6	6	6	6	7	7	6	6		3	2
18	6	6	6	7	6	6	6	6	6		2	2
19	7	6	6	6	6	6	6	5	6		2	(4)
20	7	7	6	6	7	7	7	4	6		2	3
21	7	7	7	6	6	6	7	5	4		3	2
22	6	5	6	7	5	6	6	5	6		1	1
23	6	6	6	6	6	6	6	6	6		1	0
24	7	6	6	6	7	7	6	6	6		1	0
25	6	7	7	6	7	6	7	6	7		2	3
26	7	6	7	7	6	7	6	6	7		(4)	3
27	7	6	6	7	7	7	6	6	7		0	2
28	6	7	7	7	6	7	7	7	6		1	1
29	6	7	6	7	7	7	7	7	6		1	2
30	6	6	5	7	5	6	6	7	6		(4)	3
31	5	2	4	6	4	4	(3)	7	6		(5)	(6)
Score;		Quiet Periods		P	12	18	13	19		17		
				S	19	12	16	9		12		
				U	0	0	1	1		0		
				F	0	0	0	1		1		
		Disturbed Periods		P	0	0	1	0		0		
				S	0	0	0	0		0		
				U	0	1	0	0		0		
				F	0	0	0	1		1		

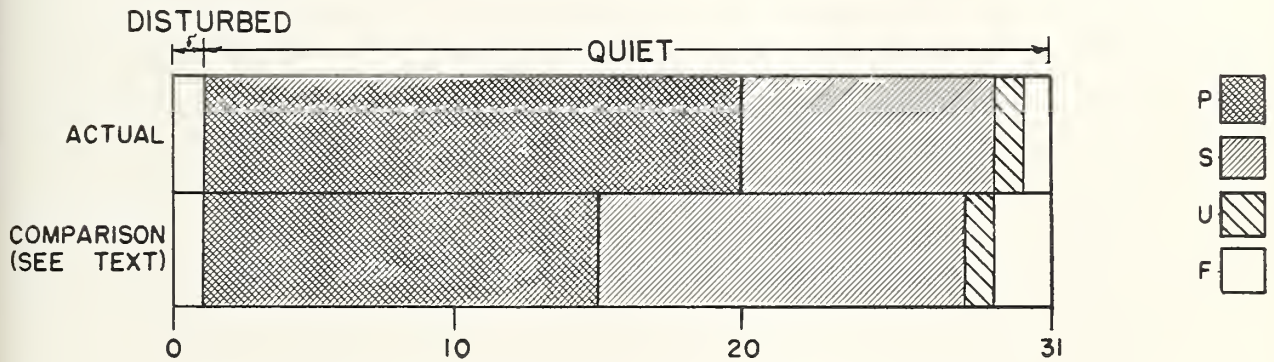
() represent disturbed values.

CRPL RADIO PROPAGATION QUALITY FIGURES AND FORECASTS NORTH PACIFIC

DECEMBER 1957

OUTCOME OF ADVANCED FORECASTS

1 TO 4 DAYS AHEAD



ALERT PERIODS AND SPECIAL WORLD INTERVALS

Alert Issued Ends 1600 UT 1600 UT	SWI	A _{Be} On Days of Alert Period (SWI Underlined)	Number of Flares of IMP ≥ 2 Reported Promptly on Days of Alert Period
1958			
Jan 08-Jan 10		04-06-09	0-0-0
Jan 27-Jan 29		06-09-09	0-0-0

COMMERCE - STANDARDS - BOULDER

